



House of Commons
Environmental Audit
Committee

**Transport Emissions:
Government Response to
the Committee's Ninth
Report of Session 2005-06
on Reducing Carbon
Emissions from Transport**

Twelfth Report of Session 2005-2006



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*Report, together with Government response
and formal minutes,*

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The Environmental Audit Committee

The Environmental Audit Committee is appointed by the House of Commons to consider to what extent the policies and programmes of government departments and non-departmental public bodies contribute to environmental protection and sustainable development; to audit their performance against such targets as may be set for them by Her Majesty's Ministers; and to report thereon to the House.

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Committee staff

The current staff of the Committee are: Mike Hennessy (Clerk); Sara Howe (Second Clerk); Richard Douglas (Committee Specialist); Oliver Bennett (Committee Specialist); Louise Smith (Committee Assistant); Caroline McElwee (Secretary); and Robert Long (Senior Office Clerk).

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References

In the footnotes of this Report, references to oral evidence are indicated by 'Q' followed by the question number. References to written evidence are indicated by page number as in 'Ev12'. number HC *-II

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Twelfth Report

Transport Emissions

1. The Environmental Audit Committee published its report on *Reducing Carbon Emissions from Transport* on Monday 7 August 2006 as HC 981.

2. The Government's Response to the Committee's Report was received on Thursday 26 October 2006 in the form of a memorandum to the Committee. It is reproduced as an Appendix to this Special Report.

3. We welcome the substantial nature and positive tone of this Government Response, which in these ways forms a very welcome contrast to some previous examples, not least from this Department. We also welcome some of the policies highlighted in the Response, such as the announced intention to increase the Renewable Transport Fuels Obligation (RTFO) in future years, the overall review of bus policy (including a review of the Bus Service Operators Grant), the development of a Low Carbon Transport Innovation Strategy, and the investment in and commitment to "Smarter Measures" schemes, including cycling provision. We also appreciate the detail supplied on the Department's appraisal and formation of policy, for instance relating to local planning and infrastructure funding.

4. At the same time, this Response has not quelled our concern over the Department's relative lack of prioritisation and sense of urgency in tackling climate change. This was a strong theme throughout our report; and while the Government Response can justifiably point to many measures which the Department is taking, it remains our opinion that these still do not add up to a commensurate response to the threat of dangerous climate change, given the transport sector's contribution to it. We are not reassured, for instance, by the Department's reliance, in the Response, of emissions projections to 2050 as evidence that its policies are on the right track. This is not just because the accuracy of any such long term projections should be subject to grave doubt, but because, according to these same projections, emissions from transport will be no lower in 2050 than they were in 1990 – at the same time as the economy as a whole will have had to make cuts of at least 60% from 1990 levels. This is precisely the lack of ambition, the sense of entitlement owing to transport as a special case, that we highlighted throughout our report, and which leaves us wondering whether the Department truly appreciates the magnitude of this issue, no matter the array of climate change policies it can point to.

5. We would certainly take on board the Department's argument in the Response that it is harder and more costly to reduce emissions from transport than other sectors, and that it may not be economically efficient to be too prescriptive about what size of cuts should come from which sectors. However, we would reiterate our recommendation that the Department work and report to a transport-specific target for carbon reductions (even if a more relaxed target than for other sectors), and our concern that, in the absence of such targets, the danger is of policy drift and insufficient action.

6. On this theme, we would also point out that the Department's Response does not address the Committee's specific point in its Recommendation 12. This was that, in reporting progress in its Annual Reports against the PSA target on greenhouse gas emissions it holds jointly with Defra and DTI, the Department does not disaggregate transport emissions from overall emissions of the UK as a whole, much less report transport's unique position as the only sector of the economy with consistently rising emissions since 1990. This was a serious criticism of the Department's obligations of transparent and accountable reporting to Parliament and the public under its PSA regime. It deserved at the least a proper explanation, and preferably a commitment to an improvement in its reporting against this PSA target in its future Annual Reports.

7. Unfortunately, the Response to Recommendation 12 is not the only place in which the Government Response appears not to have addressed the main point made by the Committee, or not to have taken on board its supporting argumentation in the main text of the report. Another key example comes in the Response to Recommendation 6; here the Department rejected the Committee's point that the latest projections for transport savings are some 0.5MtC below the lower bound of the previous projections made in 2000. The Department here is ignoring the Committee's point, clearly referenced in Figure 4 of the main text, that these projections are indeed lower if you take the *net* savings of the Renewable Transport Fuel Obligation (1MtC rather than 1.6MtC). These are, at least for consistency's sake, the figures which the Department ought to acknowledge, as they are indeed the figures which the Department consistently uses elsewhere – including this very Government Response, which says of the RTFO, "We estimate that this will cut carbon emissions by one million tonnes". Accepting that the RTFO will save 1MtC, savings from transport are indeed projected to be some 0.5MtC below the lower bound of projections in 2000. This suggests to us either that the Department is ignoring the Committee's arguments, or is failing to read the paragraphs which support its recommendations; in either case, this is inadequate and must be improved in the future.

8. On aviation, following the four reports published by our predecessor Committee between 2003 and 2004, this has again featured prominently both in the Committee's report and the Government Response. We would reiterate our praise for the Government's considerable efforts in progressing the inclusion of aviation in the EU Emissions Trading Scheme. We would, however, express our concern at the Department's rejection of our recommendation that it subject its aviation expansion policy to a fundamental rethink. We remain, for instance, to be convinced that the Department's decision (highlighted in the Response) that there should only be two extra runways in the southeast rather than three really is proof that it is pursuing a sustainable aviation policy.

9. Whether even these runways are ever built in practice is perhaps another matter. Climate change is a policy area in which things have begun to move very fast. We therefore wonder, and indeed hope, whether this Government Response may represent something more of a point of departure than a final position. We have praised the Department for initiating certain key measures; but the challenges of climate change require greater boldness. Given the particular difficulties of reducing carbon emissions from transport, due to its current overwhelming reliance on oil, even more boldness and

imagination is demanded here than from other areas. The Committee will keep a watching brief on the evolution of the Department's policies, and looks forward to seeing, and supporting, a rapid escalation of its recognition of what is required, and ambition as to what is possible.

Government response

GOVERNMENT RESPONSE TO THE ENVIRONMENTAL AUDIT COMMITTEE REPORT INTO REDUCING CARBON EMISSIONS FROM TRANSPORT (NINTH REPORT OF SESSION 2005-06)

Conclusions and recommendations

Recommendation 1: Transport has an especially important role to play in responding to the challenge of averting dangerous climate change. The Prime Minister was right to emphasise this in the letter of appointment he sent to the new Secretary of State for Transport in May, where he wrote: "in particular transport will be critical to our long-term goal of reducing carbon emissions". (Paragraph 2)

Dealing with climate change is perhaps the biggest long-term challenge that humanity faces. This makes it a top priority for the Government, as is made clear in the 2006 Climate Change Programme.

The Government is committed to ensure that we have a clear policy for the future which sets out how our long-term transport strategy, supports economic growth and development, meets the public need for transport and is consistent with our environmental goals; recognising both the scale of the challenge and the urgent need to take robust action to tackle the problem of rising carbon emissions.

Therefore, we have a range of policies in place to reduce the impact of travel on the environment and to enable individuals to make environmentally friendly travel choices.

These policies address the issue in four key ways:

- Reducing the fossil carbon content of road transport fuels
- Improving the fuel efficiency of vehicles
- Encouraging a move towards more environmentally friendly means of transport
- Working in Europe to include aviation in emissions trading, and to consider including surface transport

The analysis for the recent Climate Change Programme Review shows that existing Government policies in transport would save similar amounts of carbon in 2010 (proportional to sector emissions) as in other sectors and that had we not acted emissions from transport would have been 15% higher in 2010.

Moreover, as set out in the 2006 Climate Change Programme our policy is to look for carbon savings on the basis of where intervention is more cost-effective (among other criteria) and not on the basis of which sector currently emits the most.

This approach emphasises maximum policy effectiveness at least cost because it recognises that the underlying demand for energy and emissions and the costs of abatement are very different across different sectors. It is key to the long-term success of the Government's policies on climate change because addressing climate change in the most economically efficient manner will help us persuade the rest of the world that climate change can be tackled without sacrificing prosperity.

Recommendation 2: Progress to date indicates both that reducing carbon emissions from transport is particularly challenging, and that the Department for Transport (DfT) needs urgently to accelerate its efforts: transport is the only sector of the UK economy in which carbon emissions were higher in 2004 than the baseline year of 1990, and the only sector in which emissions are projected to be higher in 2020 than in 1990. (Paragraph 3)

To accurately compare the impact of policies across sectors on a like-for-like basis it is necessary to measure actual savings against a baseline business-as-usual projection or counterfactual, rather than against an imaginary flat line.

This is the basis on which the analysis of carbon savings across Government has been calculated for the 2006 Climate Change Programme and for the Energy Review. And this analysis shows that carbon savings in transport as a proportion of counterfactual (baseline) emissions are at a similar level as for other sectors.

A full analysis of this is set out in the 'Synthesis of Climate Change Policy Evaluations' published by the Government in April 2006 and available at www.defra.gov.uk/environment/climatechange/uk/ukccp/pdf/synthesiscppolicy-evaluations.pdf

Although transport is indeed the only sector with higher emissions in 2004 and 2020 than in 1990, the Energy Review baseline projections for 2050 show that transport emissions are expected to peak around 2010 and then decline, so that in 2050 they are projected to be around 1990 levels.

Recommendation 3. Government projections for future years' emissions should be treated with a certain degree of caution. There is some reason to expect that, unless new measures are added, these projections will have to be revised upwards in time. Government projections have often overestimated the future impacts of carbon reduction measures and underestimated total future emissions. There are important discrepancies between the emissions projections made by DfT and those made by the DTI. The Government should review the different methods used by these departments, and look at establishing a more concerted and accurate approach for greater certainty and clarity. (Paragraph 15)

The Government recognises the Committee's concern. However, projecting emissions some time into the future depends on a number of variables which are traditionally very

difficult to predict, such as the future level of international oil and gas prices, economic growth and technological and behavioural change.

Every effort is made to ensure that Government projections of future carbon emissions give the most accurate picture possible and the Government is committed to an ongoing process of reviewing and improving carbon projections including assessment of the impact of measures as data emerges.

For example, the 2000 Climate Change Programme was published shortly after the EU Voluntary Agreements on New Car Fuel Efficiency had been agreed. We were persuaded by the best available evidence at the time that they would be met. Because of a range of hard to predict factors - first among which has been shifting consumer demand to larger vehicles - the carbon savings have been lower than we originally anticipated.

In the interests of accuracy and to improve our capacity to anticipate future carbon emissions we have revised our predictions of new car fuel efficiency down considerably.

On the second point raised in the recommendation: CO₂ projections are produced by both DTI and DfT who have separate models - for good reasons:

- The DTI model provides for consistent whole economy modelling of energy use and associated emissions, of which transport is a part.
- The DfT model is a road transport only model and allows for a greater level of detail in modelling the transport sector and is better suited to the modelling of a range of transport policies.

Therefore, these models complement each other, and in fact produce very similar forecasts when the same assumptions are inputted.

For example, for the Energy Review, DTI included an assumption of a successor to the EU Voluntary Agreements on New Car Fuel Efficiency, after the Government's commitment to this had been announced in the 2006 Climate Change Programme. This caused the DTI projections for road transport CO₂ emissions to show a fall of 0.2% between 2010 and 2020, showing the same falling trend as in the current DfT projections.

Recommendation 4. If the Government's estimate of a 1.7MtC saving from the two new measures in CCP 2006 were correct, emissions from domestic transport would be projected to stand at around 43.1MtC in 2010, roughly the same as they were in 2004. This would represent the first time in years in which the growth in carbon emissions from domestic transport had flattened out, certainly a significant achievement. (Paragraph 20)

The response to the previous recommendation sets out the background to Government modelling of transport emissions.

In short: the 2006 Climate Change Programme and the Energy Review both use DTI modelling, which provides forecasts for all sectors and so ensures whole economy

consistency. The DfT model is then used to estimate the impact on carbon emissions of some individual transport policies.

Recommendation 5. Given that overall projections of carbon savings in the 2000 Climate Change Programme have had to be revised downwards in the 2006 version, we should treat these projections with some caution. And even if they are accurate, their value is reduced because they do not take into account emissions from the fastest growing source, aviation. In fact, none of the existing measures in the Climate Change Programme has any impact on this sector. (Paragraph 20)

The Government bases its estimates on the best available evidence and works constantly to improve the accuracy of its predictions. We are, therefore confident that we have offered as realistic and thorough a view of future carbon emissions as is possible, but we recognise the uncertainty inherent in estimating future developments that are so closely linked to economic growth, the shift in the relative prices of gas and oil to coal's advantage, demographic change and technological developments.

On the second point raised in the recommendations: at present, the emissions from international aviation are not included either in the Kyoto Protocol target, or the domestic carbon dioxide goal, as there is no international agreement yet on allocating these emissions to national greenhouse gas inventories. The Government is leading the debate internationally on pursuing such agreement, but as things stand international aviation is outside the remit of the Climate Change Programme.

However, the Air Transport White Paper acknowledges the need to develop an international solution for a global industry and we are continuing to work on emissions trading at the international level through the International Civil Aviation Organisation (ICAO). Given the urgency of the issue we are also pressing for the inclusion of aviation into the EU Emissions Trading Scheme (EU ETS) from 2008 or as soon as possible thereafter.

In addition the Government will continue to explore and discuss options for the use of other economic instruments for tackling aviation's greenhouse gas emissions

Recommendation 6. Even with the addition of the two new measures in CCP 2006, transport's net annual carbon savings in 2010 are now estimated to be some 0.5MtC below the lower end of the Government's original projections made in 2000. This betrays a dismal failure of purpose from the Department for Transport. (Paragraph 21)

We do not accept that the Committee's recommendation paints an accurate picture of the DfT's actions, or of the overall situation.

The 2000 Climate Change Programme projected the carbon savings from transport to be between 6.7 and 8.2 MtC.

The 2006 Climate Change Programme projects the carbon savings from transport, including the two new measures, to be 6.8 MtC. This is 0.1 MtC above the lowest estimate, not 0.5 below it.

We have reacted to changing circumstances by developing new policies and increasing effort - reflecting a continued commitment to engage with a difficult and changing situation.

With the Renewable Transport Fuel Obligation the DfT is responsible for the second largest measure in the 2006 Climate Change Programme.

Recommendation 7. We find it disappointing that, following the abolition of the fuel duty escalator, and with other policies not coming into effect for several years, the Government currently has only one policy instrument—the "Voluntary Agreement package"—fully in operation and delivering significant savings in carbon emissions from transport. (Paragraph 22)

The Government cannot accept the Committee's comments on this point.

For a start, we consider that it is inaccurate to describe the Voluntary Agreement package as one policy instrument, given that this phrase describes a set of three distinct policy instruments:

- The EU -wide Voluntary Agreements on new car fuel efficiency
- Carbon-linked variable Vehicle Excise Duty
- Carbon-linked Company Car Tax

All of these are in place and delivering significant carbon savings, as is fuel duty.

Furthermore, the Government already has in place a range of other transport policies which save carbon as well as delivering important other social and economic benefits.

These include:

- Record investment in public transport to give people a real choice of ways to travel.
- Support for a range of measures, called 'smarter choices' aimed at enabling people to choose sustainable travel options. With the Sustainable Travel Towns Initiative we aim to help turn Darlington, Peterborough and Worcester into showcase travel towns. With the Travel to School Initiative, DfT and DfES have met their interim target to have active travel plans in 40 per cent of schools in England by March 2006.
- The Government has also set up Cycling England, an expert advisory body, to plan and co-ordinate increases in cycling. Its budget has recently been doubled - to £30m over three years. We also provide cycling funding to local authorities: for 2005-06 an estimated £55m is being spent.

Recommendation 8. In defending his Department's record on this issue, the Secretary of State was keen to point out that nearly a quarter of all the carbon reductions in the Climate Change Programme 2006 come from transport. However, the existing measures which are the responsibility of the Department for Transport itself amount to

only around 3.6% of the Climate Change Programme 2010 savings. Considering that this department has policy responsibility for the worst-performing sector of the economy in terms of carbon emissions, this is not nearly good enough. (Paragraph 23)

The Government does not accept that this is an accurate reflection either of the policy effort going into reducing the carbon emissions from transport, or of the effectiveness of these policies.

We estimate overall transport carbon savings in 2010 to be around 6.8MtC, that is, around 23% of total economy-wide carbon savings in 2010.

In the 2006 Climate Change Programme the measure delivering the second largest amount of carbon saving is the Department for Transport's Renewable Transport Fuels Obligation, under which five per cent of transport fuel sold in the UK will have to come from renewable sources by 2010.

And we continue to work on delivering increased carbon savings. In the Energy Review, the Government stated:

- that we intend the level of the Renewable Transport Fuel Obligation to rise above 5 per cent after 2010-11 provided critical environmental, economic and technological criteria are met.
- that the UK will continue to work with the European Commission and relevant stakeholders in developing successor arrangements to the current Voluntary Agreements on new car fuel efficiency and will maintain our stance that all options, including mandatory targets with trading, must be considered.
- that the Government proposes to develop a Low Carbon Transport Innovation Strategy to spur vital innovation in low carbon transport technologies and to complement the recently announced £1bn public-private Energy Technologies Institute.
- the Government will also act to raise awareness of transport and climate change issues and the options available to individuals. This will be achieved by improving the quality of information available to purchasers of new vehicles and improving access to information for travellers on the carbon impacts of different modes of travel.

Recommendation 9. In view of the imperative to take bold actions in order to help avert dangerous climate change, the Department should actively encourage modal shift towards lower carbon modes of transport, and discourage marginal car and plane journeys. As part of this, the Government should take much more decisive action to shift the balance of affordability more in favour of trains, buses, and lower carbon cars and lorries. (Paragraph 26)

We are working on enabling people to make environmentally friendly travel choices. And we recognise that the most significant benefits are likely to flow from public transport improvements combined with a wider package of measures, such as demand management schemes, and better travel information. This is why we are:

- Putting record investment in **public transport**. As a result we have the fastest growing railway in Europe and the highest number of passengers in 40 years.
- Investing £11.7m in the '**Smarter Choices**' programme to support Sustainable Travel Towns, Cycling Demonstration Towns and School Travel Plans. In Merseyside, schools with travel plans in place saw car use fall by over 10%.
- Through **Transport Direct**, providing the public with high-quality travel information and ticketing service to make journey planning across Great Britain easier.

Recommendation 10. While we recognise the difficulties in decoupling economic growth from increases in carbon emissions in the transport sector, we are concerned that the Department seems to have a fatalistic attitude which sees carbon-intensive activities and economic growth as going hand in hand. The Department must be much bolder in intervening to break the upward spiral of economic growth leading to higher emissions.

This is indeed a difficult issue, but one the Government is determined to address.

There is solid and wide-ranging research that demonstrates that GDP growth and higher incomes tend to lead to increased transport emissions. For example, we would draw the Committee's attention to:

Goodwin P (1992) 'A review of new demand elasticities with special reference to short and long run effects of price changes' *Journal of Transport Economics and Policy*, 26, 155-163.

Graham D and Glaister S (2002) *Review of income and price elasticities in the demand for road traffic*, Department for Transport: London.

Hanly M, Dargay J and Goodwin P (2002) *Review of income and price elasticities in the demand for road traffic*. Department for Transport: London.

Dargay J (2004) 'The Effect of Prices and Income on Car Travel in the UK' ESRC Transport Studies Unit, Centre for Transport Studies, University College London.

Litman T ((2005) 'Transport Elasticities: How Prices and Other Factors Affect Travel Behaviour' Victoria Transport Policy Institute, www.vtppi.org.

It is also clear that Government, industry and individuals can take action to counteract that tendency. Although emissions from this sector have increased since 1990, growth in emissions is slowing down, and is not expected to grow as strongly in the future. Emissions from transport are projected to reach a peak around 2015 and thereafter fall. This is on the basis of projections that growth in demand for transport moderates, fuel efficiency in transport continues to improve and lower-carbon fuels, especially biofuels, increase their market share.

Most transport is currently relatively carbon intensive: more than 90% of person kilometres travelled each year are from motorised road transport. However, technologies - such as hybrid vehicles, biofuels and hydrogen - which have the potential to transform this

situation are already in use and are being developed in order to bring costs down to a commercially viable level.

We want to support this. This is why as a Government we proposed in the Energy Review to develop a Low Carbon Transport Innovation Strategy to spur vital innovation in low carbon transport technologies. This will complement the recently announced National Institute of Energy Technologies. For all technologies that show promise, the Innovation Strategy will:

- efficiently allocate money to laboratory research and development
- facilitate development into working products
- find funding for practical demonstrations in the real world
- allow the most cost-effective technologies to come to market

Recommendation 11. Because it is a global problem, whose worst effects we have not yet felt and are concerned to avert, climate change is a case in which it makes less sense to hand over decisions on infrastructure priorities to local and regional control, where more local and short term priorities will naturally predominate. At the very least, local and regional authorities need to be given very strong leadership and guidance on reducing carbon emissions by central Government. This is certainly not the case in guidance on the Transport Innovation Fund. The Government must ensure that TIF-funded projects give greater prominence to averting climate change. (Paragraph 30)

The aim of the Transport Innovation Fund is to enable the Department to direct resources towards the achievement of two key objectives: tackling congestion and improving national productivity.

The assessment of potential TIF schemes will take full account of the need for a sustainable balance between wider economic growth, social inclusion and environmental objectives.

The TIF Guidance (published in January 2006) makes it clear that schemes being considered for funding will be assessed against the full NATA (New Approach to Transport Appraisal) framework, which includes the evaluation of carbon impacts and other environmental costs and benefits.

The guidance also explains that any schemes which impose unacceptable environmental, social or other costs will not be funded.

Recommendation 12. DfT's PSA on climate change is failing as a mechanism that might shine a light on the Department's efforts and hold it to account. DfT reports progress against all its PSA targets in an appendix of its Annual Reports. At no point does the Department quantify the carbon emissions resulting from transport as a sector, much less report that transport is the only sector in which emissions have been rising consistently since 1990 and are projected to carry on rising. In this way, the Department is able to claim credit for being on course to meet the UK's Kyoto target, even while it is presiding over the worst performing sector of the economy in terms of trends in emissions. (Paragraph 32)

We do not accept the implication that the Department has attempted to draw attention away from the rising emissions from transport. As our evidence to the Committee makes clear, we take our environmental considerations very seriously.

The Department was fully engaged with both the Energy Review and the 2006 Climate Change Programme, and the transport chapters of both clearly acknowledge the growth in transport emissions.

For example, the Energy Review states: 'Although emissions from this sector [transport] have increased since 1990, growth in emissions is slowing down and is not expected to grow as strongly in the future'.

And the opening words of the transport chapter of the 2006 Climate Change Programme are: 'It is important to be clear why transport emissions are rising, especially at a time when emissions from most other sectors are falling'.

Furthermore, as the Energy Review states, 'Analysis for the recent Climate Change Review showed that existing Government policies in transport would save similar amounts of carbon in 2010 (proportional to sector emissions) as in other sectors and that had we not acted emissions from transport would have been 15% higher in 2010'.

It is worth noting, again, that this progress is measured against the DTI 'business as usual' forecasts, rather than against an imaginary flat baseline.

Given this, it is entirely legitimate for the Department to claim credit for being on course to meet the UK's Kyoto targets.

To summarise, we are not just sitting back and claiming credit for being on course to meet the UK's Kyoto targets. We will continue to work closely with other Government departments in this area and will also continue to consider further ways in which we can tackle carbon emissions from the transport sector.

Recommendation 13. Whether a formal PSA target or not, the Government should establish a sector-specific target for carbon emissions from transport. DfT should be given ownership of this target, and should clearly and in detail report progress against it in its Annual Reports. (Paragraph 33)

The Government's aim is to move towards a 60% reduction by 2050 across the whole economy, not just from transport.

This allows us to look for the most practical and cost-effective savings across the whole of the economy, instead of tying our hands by deciding in advance where the carbon savings should come from.

This flexibility is crucial in facing the immense challenge posed by climate change. And it maximises the carbon savings for a given intervention cost - delivering the best possible value for money to taxpayers.

Recommendation 14. The VIBAT study should be an enormously useful resource in that it has quantified different policy instruments and examined the timelines in which they could be introduced and take effect. We were therefore dismayed by the Secretary

of State's defensive distancing of the Department from this study. We urge the Department to closely examine the VIBAT study in order to construct an ambitious and well-thought out target, specifically for reducing carbon emissions from transport. (Paragraph 34)

We agree with the Committee that the kind of work undertaken in the VIBAT study has an important role to play in developing policy. However, we do not consider that either the Department's or the Secretary of State's approach to the VIBAT report should be described as 'defensive distancing'.

As part of the Climate Change Programme Review process, the Interdepartmental Analyst Group assessed a comprehensive range of policy instruments for their carbon benefits and cost-effectiveness, and that this analysis underpinned the policy decisions made in the Climate Change Programme 06 and in the Energy Review.

This work was undertaken in response to the actual Government aim of a 60% of carbon reductions across the whole of the economy in 2050. This enabled it to take a comprehensive approach to the challenge of tackling climate change.

VIBAT, in contrast, does not give the whole picture - for example it doesn't cover the costs of the measures proposed.

And VIBAT looks at cutting the carbon emissions from surface transport by 60% by 2030. The Government aims to cut emissions from the whole of the economy by 60% in 2050.

Both these are ambitious aspirations, but the Government aim has the advantage that it allows us to look for the most cost-effective and practical savings across the whole of the economy and not just within the Transport sector.

In contrast, the VIBAT study was commissioned both to test a methodology and (by using a different target to the actual one) to develop long term thinking. We consider that it is important that this kind of long term research is not constrained by being mistaken for a Government commitment.

It is also worth noting that Professor Bannister, in the 8 March Evidence Session, stated that: 'a difficulty looming in this type of research is something we did not really tackle, which is looking at potential synergies, additional effects, unintended effects, rebound effects, all these problems which can be very significant in the future. We did not really tackle those in our work'.

In contrast, for example, our modelling using the National Transport Model is able to take into account second order effect such as the rebound effect, whereby as vehicles become more fuel efficient so individuals tend to travel more.

Finally, the Department for Transport is already developing carbon-saving policies along the lines of the VIBAT recommendations - first among these is the Renewable Transport Fuels Obligation.

Recommendation 15. Average emissions of new cars in the UK have certainly been declining in recent years, reaching 169.4 grams CO₂ per kilometre in 2005, a reduction

of 20g/km, or 10.7%, since 1997. All the same, at this rate of progress, the average will only be reduced to around 164g/km by 2008, meaning that the UK would not achieve the EU target of 140g/km until around 2022. In addition, the UK is lagging behind other European countries: for 2004, the UK ranked ninth out of the 13 EU states for which data are currently available, with new car emissions standing some 7g/km above, and the rate of progress since 1998-9 behind, the EU average. The Department for Transport should lead the Government in taking decisive action to improve this record. (Paragraph 44)

The 140g/km target is a sales-weighted average to be met at European level by each motor manufacturing association: the European Automobile Manufacturers Association (ACEA), the Japan Automobile Manufacturers Association (JAMA) and the Korea Automobile Manufacturers Association (KAMA).

This gives manufacturers a degree of flexibility over levels of achievement in different countries, with individual country averages likely to be above and below 140g/km. The UK, which started from a higher-than-average position, is likely to be one of the countries with a higher average, with our central forecast being for new cars to emit in the region of 162g/km in 2008.

Average new car fuel economy in the UK has improved every year since 1995. However, progress has slowed in recent years: average new car fuel efficiency improved by 0.8% in 2004 and 0.9% in 2005.

The Government believes that, while improvements have been made, the full potential of an EU-wide scheme has not yet been fully realised. The UK will therefore continue to work with the European Commission and relevant stakeholders in developing successor arrangements to the current Voluntary Agreements on new car fuel efficiency.

While any decision on successor arrangements will be subject to consultation with the vehicles industry and other stakeholders, the UK will maintain our stance that all options, including mandatory targets with trading, must be considered.

We have recently published a discussion paper inviting views on what should replace the current voluntary agreements. This presents the pros and cons of a number of different approaches, including mandatory options.

Recommendation 16. Given that increasing the proportion of new cars that run on diesel is a very major factor in the Voluntary Agreement package—transport's biggest contribution to the UK Climate Change Programme—it is surprising that the Government does not provide any direct financial incentives for diesel over petrol. While there may be concerns about the air quality implications of increased diesel use, and about availability and price of diesel in the European market, the Government should at least set out explicitly why it is not providing such incentives, and what impact their absence is having on the UK's progress towards the Voluntary Agreement target for reducing the average carbon emissions of new cars. (Paragraph 47)

The Government's transport tax policy takes account of the full range of economic, social and environmental factors, including local air quality impacts. While increasing market

penetration of diesel vehicles can help reduce new vehicle carbon emissions per kilometre, decisions also need to take into account issues such as local air pollution.

Working in a similar way to the CO₂-based Vehicle Excise Duty and Company Car Tax, the Voluntary Agreements on new car CO₂ seek to be technology neutral in that they set a target for the carbon emissions of new vehicles to be met by each motor manufacturing association. It is up to the car manufacturing industry to devise a strategy to meet those targets, whether it be through low-emission technology, increased diesel penetration, or increasing sales of smaller, more fuel efficient vehicles. This technology-neutral approach allows industry greater flexibility in meeting the target.

It is also worth noting that average new car carbon emissions have fallen every year for the last decade, though the Government recognises the need to continue to strive for further emission reductions from road transport.

Recommendation 17. The Government deserves praise for being the first in Europe to introduce vehicle taxes specifically based on CO₂ emissions. In particular, its boldness in reforming Company Car Tax from 2002 has been rewarded by the visible progress made in that market. (Paragraph 51)

The Government is pleased that the Committee has recognised the success of the Company Car Tax reform and will continue to evaluate the reform.

Recommendation 18. Reforms to Vehicle Excise Duty, however, have been much less impressive, even allowing for the changes announced in Budget 2006. Tax differentials between higher and lower carbon cars must be made much wider if they are to drive market transformation. We note that in its submission to the Climate Change Programme Review, the Sustainable Development Commission stated it had "modelled the carbon savings that could be achieved through new VED rates. Our proposal is that [...] that there is a £300 gap between each band. So the top band of VED would rise dramatically to £1800/yr [...] and below this the bands would be at £1500, £1200, £900, £600, £300, and £0". The Department should publish its calculations of resulting carbon savings from adopting such £300 differentials between Bands. (Paragraph 52)

Alongside the CCT reforms and other incentives to improve the fuel efficiency of vehicles, the graduated VED system is designed to provide a signal to consumers at the point of purchase to bear in mind the environmental impact of the models that they are considering. The Budget 2006 changes mean that the differential between the lowest VED rate for petrol cars and the highest, which was £100, is now more than double that at £210. The reforms build on the existing VED framework and are part of a range of policies which work towards delivering a lower carbon transport system.

When considering proposals for further increases to the differentials between bands, it is important to take account of all relevant economic, social and environmental factors, including proportionality and fairness to motorists, and transparency and consistency of signals to motorists and manufacturers. The role of VED also needs to be considered in the context of the wider range of economic and other measures which influence motorists, such as fuel duty and fuel prices, the voluntary agreement with car manufacturers and the new labelling scheme in car showrooms.

Internal modelling of scenarios for further reforms to VED is undertaken as part of the ongoing formulation and development of Government policy, as part of the regular Budget cycle. As such, it is not intended for publication.

Recommendation 19. In particular, the new Band G is ineffective—and needs to be substantially raised in cost. As things stand, the VED paid by the highest emitting 4x4s and luxury saloons in Band G represents a lower percentage of their sales price, and works out at half the cost per gram CO₂ emitted, than lower emitting hatchbacks in Band C. (Paragraph 53)

Band G was introduced in March of this year, and the reformed VED structure means that the differential between the lowest VED rate for petrol cars and the highest, which was £100, is now more than double that at £210. The Government will keep VED under regular review through the normal PBR and Budget process.

20. Progress against the central target in the Powering Future Vehicles Strategy—that by 2012, 10% of all new cars would emit under 100g/km—has so far been microscopic. Given that around 2.5 million new cars are sold each year in the UK, the Government's target would require sales of some quarter of a million low carbon cars in 2012. In 2004, the number of such sales reached a grand total of 481. In 2005, this figure declined to 467; and as of July 2006 there was only one such model available for sale at all, with sales for the first half of the year of 188. (Paragraph 54)

The Powering Future Vehicles (PFV) Strategy recognised that the PFV targets were based on the information available at the time on the pace of technical development and that they would need to be kept up-to-date (see PFV para 2.1.8). It therefore committed to review the level of the targets in 2005 to ensure that they remained challenging but deliverable. This review was postponed to take account of the outcomes of the Climate Change Programme Review and the Energy Review and is currently under way.

Recommendation 21. In order to help increase sales of the lowest carbon cars, the Department should work with the Energy Saving Trust to ensure that its transport fuel infrastructure grants significantly increase the availability of fuelling stations and electrobays for electric cars. (Paragraph 54)

DfT provides funding for the Infrastructure grant programme, which provides grant funding for alternative refuelling infrastructure and is managed by the Energy Saving Trust. The Department works closely with the EST to ensure that the grant programme is as effective as possible.

Recommendation 22. The Department's argument for scrapping its low carbon car grants is that these would only cover 30-40% of the additional purchase costs of such vehicles, and that this is not enough to achieve market transformation. This would seem to apply equally to the existing VED structure, and support the case for much higher differentials. (Paragraph 56)

A review of the proposed Low Carbon Car grant programme showed that it would not deliver value for money for the taxpayer. The review took account of the direct costs and benefits of providing grants for the purchase of low carbon cars as well as the potential affect the grants might have on wider market transformation. Given the limited value of

the individual grants (30-40% of the additional purchase cost) and the limited number of cars that could be grant funded (the programme would have provided grants for 8500 cars a year - only 0.4% of the new car market) it was considered highly unlikely that the programme would have had a significant impact on the market. Without this wider market transformation affect, the programme would not have offered value for money.

Government policy on VED is set out elsewhere in this document.

Recommendation 23. At the same time, we welcome the announcement that these grant monies will be reallocated to a new communications campaign to promote consumer information on the most carbon-efficient cars. However, the Energy Saving Trust also told us that they had previously proposed setting up just such a package, but that DfT had turned them down. The result is that for 18 months there was neither the grants programme nor the communications campaign. This suggests a lack of focus and leadership from within the Department. In order to play a truly effective role in nurturing new technologies and achieving market transformation, it is essential that the Government is both clear in its own mind as to how to achieve its goals, and shows long term commitment to them. (Paragraph 57)

The Department thanks the Committee for welcoming the announcement of the new communications campaign.

This campaign reflects the Government's strong support for the provision of consumer information. It focuses on vehicle purchase, eco-safe driving and business travel planning and will see £10m invested over 2 years, and beyond.

The Energy Saving Trust (EST)'s proposal for promoting consumer information was not taken forward because further consideration was required in terms of wider climate change and transport communications issues. The Department needed to put in place the wider framework before specific proposals could be assessed or taken forward. Work is now actively in hand to develop DfT's communication campaign.

The suspension of the previous grant programmes was due to concerns about the nature of the programmes and their compliance with European state aid rules - it was unrelated to decisions on the communications campaign. However, the decision not to proceed with the proposed revised grant programmes meant that funding was released and could therefore support the communications campaign.

Recommendation 24. There is great scope for progress using currently available technology, simply by influencing consumers to choose the lowest emitting cars in each class. But in order for this to be realised, car manufacturers and traders need to be given a greater incentive to sell more lower carbon cars, and this means a much stronger regime of sticks and carrots. We welcome the hints made by the new Secretary of State that he would consider pressing for the successor to the current EU Voluntary Agreement to be made mandatory —and we urge him to do so. In addition, and in advance of a new Europe-wide Agreement, the Government should implement a

feebate or certificate trading scheme, in order to give the industry a genuine incentive to develop and promote more low carbon vehicles. (Paragraph 60)

The Department thanks the Committee for its positive stance on the Secretary of State's approach to successor arrangements to the EU-wide Voluntary Agreements on new car fuel efficiency and reiterates the points made in the response to recommendation 15.

Any new option will form part of a portfolio of measures in the UK to reduce CO₂ emissions from road transport including fiscal measures such as graduated Vehicle Excise Duty and company car tax and measures to reduce the carbon content of fuels, such as the Road Transport Fuels Obligation (RTFO).

Recommendation 25. In the meantime, given the urgent need for a step change in the take up of low carbon emission vehicles we strongly recommend that the existing differentials in VED between different categories of cars are widened substantially. These changes could be introduced at once on a revenue neutral basis and would reward consumers for making greener choices as well as encouraging manufacturers to produce more greener cars. We also urge the Government to examine whether differential rates of VAT can be charged on new cars to benefit the lower emission models. (Paragraph 61)

The Government will keep VED rates under review as part of the normal PBR and Budget process. VED is, though, just one of a number of instruments which impact on motorists' choices and, as set out above, further reforms to it need to be considered in the context of the wider range of economic and other measures, including fuel duty, and other social and economic factors, including fuel prices.

Long standing agreements with our European partners allow the UK to keep our existing VAT zero rates, but we may not extend them or introduce new ones. Therefore we could not introduce a new zero rate for low carbon emission cars. EU law also sets down a list of goods and services to which a reduced rate of VAT may be applied - of no lower than five per cent. However this list does not currently contain provision for a lower rate to be applied to low emission motor cars.

Recommendation 26. Even if the Voluntary Agreement very substantially increases the carbon-efficiency of car travel, it is less certain when—or if—it will start reducing carbon emissions from road transport in absolute terms. If cars with inferior g/km are not scrapped but remain on the road, then the reduction in emissions of new cars will only have a limited effect; and will in addition be offset by the simple increase in car journeys resulting from an increase in the number of cars owned. Equally, it is important that the sustainable production of new cars and disposal of old cars is central to whatever succeeds the current Voluntary Agreement. Finally, we are also concerned that technology is not moving fast enough. All this strongly suggests that the VA approach is not enough; it must also be complemented by measures to curb the amount that people drive. (Paragraph 63)

The Government's analysis of the carbon savings from the Voluntary Agreement takes into consideration the turnover of the fleet and expected changes in kilometres driven in the future. Taking this into account, we estimate that the Voluntary Agreement package will deliver carbon savings of 2.3MtC in 2010.

Further Government modelling suggests that road transport carbon emissions will start falling post 2010 largely because of a combination of technological improvement, demographic change and slowing car ownership growth.

Recommendation 27. We welcome the announcement in CCP 2006 that "Obligated companies will be required from day one to report on the level of carbon savings achieved and on the sustainability of their biofuel supplies." However, it is not clear whether the proposed assurance scheme is intended, not just to assure the sustainability of biofuels imported into the UK, but to have an effect on global biofuels production. The Government should emulate the leadership it has shown on sustainable timber, and work to establish a rigorous international standard on sustainable biofuels production and procurement. (Paragraph 68)

Under the Renewable Transport Fuels Obligation five per cent of transport fuel sold in the UK will have to come from renewable sources by 2010. We estimate that this will cut carbon emissions by one million tonnes, equivalent to taking one million cars off the road.

The Government now intends the level of the Obligation to rise above 5 per cent after 2010-11 provided critical environmental, economic and technological factors are met.

The environmental assurance scheme which we are developing as an integral part of the RTFO will apply equally to home-grown and imported biofuels. In each case, the company responsible for putting the fuel onto the UK market will be required to report on the lifecycle carbon savings associated with it, and on its wider environmental and social impacts. This is intended to ensure that the biofuels supported by the RTFO are those which deliver the maximum carbon savings with the minimum environmental impact. We envisage that the RTFO Administrator will make these reports public, so that stakeholders will have a clear picture of how different companies are performing in this area.

In the longer term, the Government intends to move to a system that gives a direct incentive for sourcing the most sustainable biofuels. This could be achieved by crediting suppliers with different numbers of certificates depending on the carbon content of the fuel they supply.

Through the Government's Low Carbon Vehicle Partnership, we are also leading on the development of a biofuels sustainability standard. This will help companies ensure that the biofuels that they source to meet their obligation are produced responsibly and drive forward sustainability performance across the industry.

The UK Government recognises that improvements to the sustainability performance of the global biofuels market is best served by the development of an international standard. We are therefore encouraging the European Commission to develop standards at the EU level, and we are sharing the UK's work in this area as it develops.

Recommendation 28. The fuel duty escalator has played an important role in helping to reduce the increase in CO₂ emissions from road transport. Given the transport sector continues to present seemingly intractable problems of emissions growth, the Government should seriously reconsider the case for annual increases in fuel duty, with appropriate exemptions for lower carbon fuels, and accompanying investments in

public transport to provide revenue neutrality. Given the huge sensitivities of this issue, particularly at a time of high oil prices, there can be few more urgent issues on which those who have argued for an all-party consensus on climate change policy should now focus their attention. (Paragraph 71)

It is the Government's policy that fuel duty rates should rise each year at least in line with inflation, as we seek to meet our obligations to reduce polluting emissions and fund public services. However, it is also right to take account of wider social and economic factors. The planned fuel duty increase from 1 September did not go ahead due to the risk of oil price volatility remaining high, and the position will be reviewed in the Pre-Budget Report. Budget 2006 announced that the duty differential for biodiesel and bioethanol would be maintained at 20pence per litre until 2008-09. The introduction of the RTFO from 2008 will also have a significant impact on biofuel take up and carbon mitigation from road transport, saving around one million tonnes of carbon by 2010-11.

Recommendation 29. We strongly support the introduction of a national road user charging scheme as soon as technically possible—and would support the revival and early introduction of the formerly proposed Lorry Road User Charge. However, it is absolutely vital that such a scheme is designed to reduce carbon emissions, not just congestion. The Secretary of State must clarify his position on this, and make an unequivocal commitment to using road charging markedly to reduce CO₂ emissions. Failure to do so would undermine any claims DfT has to take climate change seriously. (Paragraph 75, 77)

The Government welcomes the support of the Committee on road pricing. Research has shown that, on paper, pricing can offer significant benefits to motorists and the country as a whole through reduced congestion and improved environmental impact. Turning the theory into real improvements on the ground will be a significant challenge, particularly in terms of taking forward the public debate.

The Government continues to take the position that road pricing is a congestion policy first and foremost. Modelling carried out for the Feasibility Study of Road Pricing in the UK¹ (July 2004) suggested that road pricing offers the possibility of big improvements in congestion (a potential 40-50% reduction) but only marginal gains for CO₂ (a potential 1-5% reduction) for a hypothetical national distance-based scheme. For any scheme developed the Government will seek to avoid negative effects, including those that might impact on the achievement of our CO₂ targets.

We recognise the importance of making sure that road pricing complements the range of policy tools already in place to address environmental concerns. It should be seen as one part of a wider package of transport measures which address the issues of transport management at the same time as giving people genuine choices.

To support the development of pathfinder road pricing schemes we are making available substantial funding, up to £200 million a year through the Transport Innovation Fund (TIF). In practice this is likely to mean road pricing schemes in some urban areas,

¹ Available from the Department for Transport web site at http://www.dft.gov.uk/stellent/groups/dft_roads/documents/divisionhomepage/029709.hcsp

combined with investment in public transport, and possibly in walking and cycling projects, so that more people have an alternative to the car. When considered as a package these schemes may well reduce the overall impact of transport on the environment.

More work will need to be done on how road pricing will work in practice, at a national or a local level, before it is clear how practicable it is to build environmental objectives directly into any pricing scheme. There is a risk that loading too many different objectives onto one policy could increase costs and impact on public acceptability, this could put at risk the delivery of road pricing and the associated congestion benefits. None of this rules out developing a more sophisticated approach in the longer term, but we need to walk before we promise to break into a run.

On the specific point of the Lorry Road User Charge, we have already carried out a great deal of work looking at such a scheme. However, this is now being taken forward within work to look at national road pricing. As the then Secretary of State for Transport, Alistair Darling, announced to the House on 5 July last year: "That [the lorry charging work undertaken] confirmed that a distance-based charge has the potential to be a workable and practical way forward. But our thinking on national road pricing has developed further. We are now taking forward work on a national system of road pricing, so it is right for us to take forward the plans for distance-based lorry charging as part of the wider work on national road pricing — to develop a single, comprehensive, cost-effective system."

Recommendation 30. Given that the range of Smarter Choices measures do not require large material infrastructure projects, they can deliver significant carbon (and congestion) reductions rapidly and cost-effectively. We welcome the Department's announcement of forthcoming campaigns to promote eco-driving, its expansion of the Travelling to School Initiative, and its increase of funding of Cycling England. But it must broaden and accelerate implementation of such measures, and set itself an ambitious target of CO2 savings to be achieved as a result. In conducting promotional campaigns, the Department should also learn from Transport for London's experience in using advertising to promote individual choice of low carbon modes of transport. Eco-driving should be incorporated into the driving test, and eco-driving simulators should be used in schools (Paragraph 79)

Smarter Choices are an integral part of the Government's transport strategy.

Through our substantial package of measures, we are in the process of delivering:

- an active travel plan in place for every school by 2010
- three showcase sustainable travel towns by 2009
- 6 cycling demonstration towns by 2008

The current Government investment in Smarter Choices includes:

- Commitment to spending over £100 million in support of the Travelling to School Initiative to 2008.
- £10 million, 5 year programme to develop three showcase sustainable travel towns [Darlington, Peterborough and Worcester] and test the impact of applying sustained and intensive implementation of smarter choices on a town-wide basis.
- A recent doubling of investment so that £30 million is spent over three years to promote cycling through the recently formed Cycling England.
- Researching and disseminating best practice.
- Ensuring smarter choices make effective contributions to local transport planning and to creating more sustainable developments across the country.

All this is enabling us to evaluate the potential benefits from smarter choices programmes and to take forward cost-effective and practical carbon saving policies.

We are working to ensure that the DfT communication work is soundly-based and takes account of all relevant work done by other organisations.

On the Committee's final point: As part of the qualifying process to gain entry to the Register of Approved Driving Instructors, candidates are required, as part of the examination of their driving ability, to demonstrate that they do drive in an environmentally friendly manner. Not to do so may contribute to the failing of the test. This has been part of the examination for the last 18 months.

The Driving Standards Agency is currently actively working towards including in all licence acquisition driving tests an assessment of the candidate's ability to drive in an environmentally friendly manner.

Recommendation 31. We understand the Government's reluctance to lower the motorway speed limit, or rigorously enforce the current 70mph limit, given the likely public controversy such a policy would provoke. However, compared to the potential danger which this could help to avert, proper enforcement of the legal speed limit would be a trivial incursion on personal liberty. The Government cannot forever duck the hard decisions in its duties to face up to "the greatest long-term challenge facing the human race", in the words of the Prime Minister. In matters of such grave importance, the Government does a disservice to future generations by running scared of critical tabloid headlines. Beyond its direct impact, a new policy on speed limits would help to raise awareness of the reality of climate change, and of the need for everyone to take action on it. Finally, in considering a design for a national road charging scheme, the Government should choose one that could cost-effectively aid enforcement of the motorway speed limit. (Paragraph 82)

Government policy on reducing carbon emissions through greater enforcement or lowering of speed limits was considered as part of the Climate Change Programme Review process. Considered alongside all the other carbon reduction proposals, the policy was subjected to the same rigorous evidence-based assessment. It was in the light of this

detailed analytical assessment that decisions on carbon reductions were made, including on speed limits, and not in response to critical tabloid headlines as the Committee suggests.

The current national speed limit of 70mph on dual carriageways and motorways reflects a practical balance between economic, environmental and safety objectives. Enforcement of speed limits is a matter for the police, with whom the Government works closely and is considered a policy of last resort: the Government wants drivers to stay within speed limits voluntarily. Our speed limit and camera signing policies are designed to help drivers do this. Local Authorities do have powers to introduce lower speed limits on their roads and they are best placed to decide if this is appropriate taking into account all local conditions and needs.

Our analytical work considered the case for lowering speed limits against economic, environmental and safety objectives. The conclusions of this analytical work demonstrate that although a reduction in the 70mph limit and/or strict enforcement of the current limit could bring about reductions in the amount of carbon emitted, this and other benefits are outweighed by the costs. For strict enforcement of the current limit, analysis suggests that the benefits of any carbon savings and improvements in safety and air quality are outweighed by the costs associated with the minimum additional enforcement effort required. In the case of reducing the speed limit from 70 to 60 mph, the costs to society are even greater. Our estimate is that changing the limit from 70mph to 60mph would result in a net cost to society of £21.0bn-£22.2bn over the assumed lifetime of the policy (2008-2020).

More generally the Government is working to raise awareness on climate change and inspire collective action. In December 2005 Defra launched a new Climate Change Communications Initiative with the aim of changing attitudes towards climate change. The Government has also embarked upon a programme to enhance consumer information specifically targeting transport emissions. Key to this is ensuring individuals and vehicle manufacturers have the right information and incentives to encourage them to make the most environmentally friendly choices on transport.

On the Committee's suggestion that a potential future national road pricing scheme should have the capacity to cost-effectively aid enforcement of the motorway speed limit, the Government considers that more evidence is needed. This is for two important reasons. First, more work is needed on the technical viability of the systems and operations that could deliver road pricing. Second there are important issues of public acceptance to consider. More work is required in both these areas before any decisions on delivering road pricing are made.

The Government has announced that it would allocate £10 million for demonstration projects to help us understand more about how road pricing schemes would operate in practice. We expect that the demonstration projects will commence in 2007, and that they will run for around one to two years.

Recommendation 32. One of the most effective means the Government has of constraining emissions from road transport is to reduce reliance on car use through planning regulations which can shape the areas in which people live. The Department for Transport and the Department for Communities and Local Government must work

more closely together to ensure that new developments, especially in the housing growth areas, are designed to minimise car use. Planning policy, in particular, should include specific measures for reducing road journeys. (Paragraph 83)

The Government fully recognises the importance of the interaction between planning policies and the need for transport and travel. The Department for Communities and Local Government (DCLG) has published detailed statutory guidance for planning authorities (Planning Policy Guidance 13: Transport) which emphasises the need to shape the pattern of development in a way which both supports a prosperous and growing economy while helping to reduce the need for travel, and particularly car travel, recognising the impact of traffic growth on climate change.

This guidance covers all kinds of developments, including housing. It states that Transport Assessments and Travel Plans should be submitted alongside planning applications which are likely to have significant transport implications. These will help identify measures to promote sustainable travel choices and to provide alternatives to the private car.

DCLG and DfT have drawn up guidance on Transport Assessment which is currently out to consultation until 31 October.

(http://www.dft.gov.uk/stellent/groups/dft_roads/documents/page/dft_roads_612257.pdf).

DfT has also published Guidance on Travel Plans, which sets out detailed advice on measures to promote sustainable travel choices and to provide alternatives to the private car.

Furthermore, climate change is specifically highlighted in the Department for Transport's Local Transport Plan (LTP) guidance as one of a number of issues about which it expects authorities to take every reasonable opportunity to improve in planning and delivering local transport measures. Two of the four shared priorities are tackling congestion and air quality problems - and many measures related to these priorities will also tackle climate change.

The next (and third) round of LTPs is due from local authorities in 2010 and the Department will revise the guidance before then.

We have also recently issued revised guidance to regional bodies on the preparation of regional transport strategies. This underlines that spatial policies in each region need to reflect the importance of delivering more sustainable travel patterns, for instance on locating housing, commercial development and key services in areas of high public transport accessibility.

For example, Buckinghamshire County Council's workplace travel plan for its own staff has cut single-occupancy car commuting from 71 to 49% over five years. Having proved the concept can be successful via their own plan, the council is working with other companies and organisations based in the county.

And finally, the Government is also currently developing a new planning policy statement on climate change which, in setting out how the Government expects participants in the planning process to work towards the reduction of carbon emissions in the location, siting and design of new development, will make clear that the location of new development

should support the reduction of carbon emissions through, for example, mixed development and reducing the need to travel.

Recommendation 33. We warmly welcome the announcement of increased funding for Cycling England. But the Department should accelerate progress by implementing lessons from the Dutch commitment to continuous improvement of cycling infrastructure. (Paragraph 85)

The Department thanks the Committee for its warm welcome to the announcement of increased funding for Cycling England. We are committed to continuing to encourage cycling by means which are appropriate for local conditions.

This is why, through Cycling England, we are funding 6 Cycling Demonstration Towns with a £8.4m investment over 3 years. This work aims to test what impact we might have on cycling levels in English towns by investing at the levels of some European towns.

Recommendation 34. We were unimpressed by the Secretary of State's defence of the Government's record on road building. Estimates of CO2 emissions arising from road proposals should be subject to independent audit. Furthermore, given that, by its own admission, more road space leads to more traffic and emissions, the Department should deliberately apply more stringent criteria to appraisals of proposals for the construction of new roads relative to lower carbon alternatives, such as the combination of public transport improvements and demand management measures. (Paragraph 88, 89)

The Department's appraisal framework, and its value for money guidance, ensures that changes in greenhouse gases are taken into account when reaching a view on the value for money of a proposal. This is true for rail, and for other modes.

The Department assesses all new transport infrastructure proposals, including roads, using the New Approach to Appraisal (NATA) guidance. This guidance is published on the web and can be found at www.webTAG.org.uk

The Department's guidance requires all scheme promoters seeking DfT funding to assess the impacts of new transport infrastructure proposals in terms of the Government's five transport objectives, one of which is to protect the built and natural environment. As part of assessing the impact of new proposals on the environment the guidance requires scheme promoters to assess the impact of their proposals on greenhouse gas emissions. As CO₂ is considered to be the most important greenhouse gas, changes in CO₂ emissions are used as the key indicator for assessing the impacts of new proposals' on climate change.

For all schemes that cost in excess of £5m the department's guidance requires scheme promoters to estimate the level of carbon dioxide emissions in the current year and in the opening year of the scheme, both with and without the scheme in place. The change in carbon dioxide emissions in the opening year of the scheme is then used to provide an overall assessment of the scheme's impact on greenhouse gases.

All appraisal information submitted to the Department as part of funding bids is scrutinised by individuals with no involvement in the delivery of the scheme to ensure that

it provides an accurate indication of the likely impacts and that it is consistent with the Department's published appraisal guidance.

The aim of the Department's appraisal guidance is to ensure that all of the significant impacts of transport schemes are assessed and reported in a consistent way across schemes. The Department improves and updates guidance to ensure that it continues to reflect the best available methods for assessing the impacts of transport schemes and that it allows funding bids to be judged on their merits.

Therefore the Department does not support the specific proposal made by the Committee that the Department should deliberately apply more stringent criteria to appraisals of proposals for the construction of new roads relative to lower carbon alternatives. Instead the Department believes that the benefits of its investment in transport schemes are maximised by ensuring that all proposals are subject to the same stringent criteria, giving due weight to impacts on carbon emissions and other environmental factors.

Recommendation 35. Allowing regions the freedom to nominate projects for funding seems mainly to have resulted in a very high proportion of bids for road projects, although there have also been some major public transport proposals such as the Manchester Metrolink extensions. The Government should ensure that infrastructure proposals from both national agencies and local authorities are governed by a more integrated planning and appraisal process, and that rail proposals are assessed alongside competing road proposals. In putting forward and assessing the merits of different proposals, such a process should take into account the transport needs of each region as a whole, while assessing the combined national impact of such proposals on the UK's overall carbon reduction targets. (Paragraph 90)

As set out in the response to recommendation 32, the Government is currently developing a new Planning Policy Statement on climate change.

Further to the answer above, setting out the Departmental approach to new infrastructure appraisal, it is worth noting that at a national level we assess the combined impact of road build and rail schemes on total carbon emitted through the Department's National Transport Model.

We are continually updating and developing this model to ensure that we can make the most accurate possible assessment of their impacts.

Recommendation 36. Buses can make a significant contribution to carbon reductions, if they can attract passengers out of their cars. But CCP 2006 makes no mention of seeking to achieve modal shift from cars to buses. The Department should explicitly adopt modal shift from cars to buses as an environmental objective, and set itself a target of emissions savings to be gained as a result. (Paragraph 91)

The Government is taking a long hard look at the issues around bus travel. Buses have a crucial role in delivering good transport at local level. Some local authorities are considering how measures such as road pricing can be combined with other transport improvements, including better public transport, to tackle congestion and make our towns and cities better places to live and work.

The Government has noted the evidence from case studies that when significant improvements are made to the quality and reliability of bus services, typically through a (non-statutory) quality bus partnership agreement between the operator and the local authority, car users can be encouraged to shift to bus travel. This can create a virtuous circle, whereby increased patronage leads to a more frequent service which will attract even more users. The Department is strongly in favour of such agreements and has recently issued guidance to encourage the use of statutory quality partnership schemes under the Transport Act 2000.

We have said that we will use the Transport Innovation Fund to support local authorities who come forward with packages of measures that tackle congestion through demand management and better public transport, particularly bus services.

The Transport Innovation Fund will assist the DfT and its delivery partners in achieving one of its key objectives of tackling congestion through demand management and better public transport, and contributing to national productivity by:

- supporting the costs of smarter, innovative local transport packages that combine demand management measures, such as road pricing, with modal shift and better bus services;
- supporting the funding of regional, inter-regional and local schemes that are beneficial to national productivity.

Recommendation 37. Given that the Climate Change Programme 2006 contains a mere 79 words on the role which buses can play in reducing carbon emissions, we are somewhat surprised that 31 of these words are devoted to the Department's policy on Quality Contracts. Not only has there never been a single Quality Contract established, the previous Secretary of State seemed to admit it was a failed policy. Something much more effective in enabling authorities throughout England to apply the kind of powers currently enjoyed only by Transport for London should be introduced as an urgent priority. The current deregulated system has been heavily criticised by both the Transport Committee and the Public Accounts Committee. The fact that the arrangements outside London are also undermining climate change policy should be the final straw for the deregulated system in its current form. (Paragraph 94)

As the previous answer made clear we are reviewing bus policy at the moment. We want to deliver better transport across the country. The 2006 Climate Change Programme does not give a comprehensive list of the measures the Department is taking, or encouraging others to take, to increase bus patronage. Among other measures, the early signs are that the introduction of free off peak concessionary fares for people over 60 and disabled people within their local authority area is increasing local bus use, some of whom would otherwise be using private cars. The Government announced in the Budget 2006 that the free concessionary entitlement would be extended to enable travel for eligible people on local buses anywhere in England from April 2008.

Recommendation 38. We warmly welcome the recent statement by Ms Merron to the Transport Committee, as to the Department's examination both of the evidence behind

the differing success of different bus services, and of the legislative and funding options which could be employed in shaping the future of bus policy. This hopefully indicates a very positive move on the part of DfT, and we look forward to developments under the leadership of the new Secretary of State. (Paragraph 95)

The Department for Transport thanks the Committee for its welcome to the statement recently made by Gillian Merron. She and the Secretary of State are currently considering all aspects of bus policy and engaging with stakeholders to obtain a better understanding of what makes a successful strategy for promoting bus use, and what changes in the regulatory structure might be helpful in doing so. They intend to make a further statement in the Autumn.

Recommendation 39. We are surprised that the Department does not intend to reinstate the Low Carbon Bus Grant programme. We are left asking: just how is the Department going to incentivise bus operators to introduce low carbon vehicles on a large scale? This must be explicitly addressed as part of the review of the Powering Future Vehicles Strategy. (Paragraph 98)

A review of the six cleaner fuel and vehicle grant programmes concluded that the benefits of four of the six programmes (including the Low Carbon Bus programme) would be limited to the purchase of emissions reductions. In the absence of substantial wider benefits, such as market transformation effects, this represents poor value for money. The programme would not deliver for the environment or for the taxpayer.

Under state aid rules funding per vehicle would be limited to 30-40% of additional cost of the low carbon bus compared with a conventional bus - take-up may not be high. The programme could only fund 50 to 100 buses (0.6-1.2% of the new bus market).

As part of the Comprehensive Spending Review, we are currently assessing the contribution of bus subsidies, including the Bus Service Operators Grant (BSOG), to the delivery of our objectives – including environmental objectives – and considering whether changes to current arrangements would deliver increased value for money.

Recommendation 40. The example of Sweden's local bus fleets demonstrates the progress that can be made today in using sustainably produced biofuels to meet a significant element of society's transport needs. By acting early, Sweden appears also to be handing its bus manufacturing industry a potential competitive advantage. The Department must accelerate progress in the use of biofuels and biogas buses in England, beginning by identifying and tackling the current barriers to take up. (Paragraph 99)

The Government thanks the Committee for highlighting the work done on local bus fleets in Sweden. We continue to monitor developments in this area both in Europe and further afield - for example in New York.

As part of the Comprehensive Spending Review 2007, the Department is reviewing all aspects of its current funding for bus services to assess value for money, the contribution of bus subsidies to Government objectives (including environmental objectives) and possible options for change.

The rules for the Department's BSOG provide for 100% rebate of the fuel duty paid by local bus service operators using biodiesel, compared with the 80% rebate of duty which normally applies to other fuels. The rate of rebate paid on a 95% diesel/5% bio-diesel blend has been set at the rate applicable to Ultra Low Sulphur Diesel.

Recommendation 41. With a new sense of stability, and with the Department's announcement of work on a long term strategy, the time is right for the rail industry to incorporate climate change policy into its major priorities. In particular, the advantages of rail over road and air travel in terms of carbon emissions must be fully taken into account in, and add weight towards, any consideration of investment to expand capacity the network. This must apply equally to consideration of whether to cut or retain existing local services. (Paragraph 100)

The DfT will publish a paper in summer 2007 on the long term issues facing rail. This will provide a sense of direction and continuity for the industry and a clear positive message about the prospects for passengers and freight.

Environmental concerns will form a core part of this strategy and are being incorporated into the tools we use to assess the case for additional investment in the rail network.

Recommendation 42. We would support proposals for the construction of new high speed rail links, both for the role they would play in directly achieving modal shift from air to rail, and for leading to a freeing up of capacity on the existing network. At the same time, it is important that in taking forward any proposals for new high speed services, the Department looks to choose a design which is as energy efficient as possible. (Paragraph 102)

The DfT is considering the case for an additional high speed line alongside other options for accommodating projected increases in passenger demand. Environmental impacts will form an important part of our appraisal process.

Rail is generally an energy efficient form of transport compared to other modes, particularly when passenger loadings are high. However, as train speed increases, energy consumption – and hence carbon emissions – also increases. (For example, air resistance quadruples with every doubling of speed which means the train needs to burn more fuel to maintain higher speeds). So one of the issues the DfT is assessing is the net environmental impact of high speed rail travel taking account of potential emission reductions elsewhere eg: by reductions in domestic flights.

The DfT is leading the project to replace the existing High Speed Train fleet. A particular objective is to ensure the HST replacement is as fuel efficient and environmentally sustainable as possible.

The project – which is advised by a cross-industry stakeholder group – will take a whole-life, whole-system approach taking into account costs for both infrastructure and operators over the full 30-year life of the asset.

Recommendation 43. Local rail services are vital for creating sustainable communities. They help to boost long term economic prosperity while managing demand for car journeys, and hence carbon emissions. We cannot see the logic, at a time when we need

to be accelerating the UK's carbon reduction efforts, in proposals to reduce local train services. All decisions on the future of individual local services must be subject to thorough and transparent assessment, which views them extremely negatively if they are estimated to lead to an individual rise in carbon emissions. (Paragraph 104)

The DfT recognises that rail services can provide important social and economic benefits to local communities. Rail can also offer congestion and environmental benefits, in particular on busier routes and where it provides an effective alternative to road travel. The DfT will take appropriate account of all of these factors in any decisions about expanding or reducing rail services.

However, it is certainly not the case that rail will always offer a carbon benefit over other modes. A very lightly loaded train will not offer carbon benefits compared with more intensively used buses or even a modern, fuel efficient car. In these circumstances, the longer term challenge for the DfT, local communities and transport providers is to identify how to deliver more sustainable transport solutions.

Appraisal of closure proposals is based on the New Approach to Transport Appraisal (NATA) approach and covers the five criteria specified in NATA, including environmental, safety, accessibility, integration, and economy (including regeneration).

Closures will not be ratified by the Office of Rail Regulation, if retaining the service can be justified in view of the above approach/analysis.

The assessment will take account of monetised as well as non-monetised impacts and proposals must consider alternative options for retaining the service.

Recommendation 44. We second the Transport Committee's conclusion that the current ticketing structure of train operating companies is "not fit for purpose". In order to assist modal shift, the Department should take responsibility for ensuring rail fares and booking are simplified and made more transparent, and should also encourage the creation of user-friendly means of booking rail tickets to European destinations. (Paragraph 107)

We agree with the committees that fare structures are unnecessarily complex and need simplification. We also believe that this complexity damages passengers' perceptions of value for money and we intend to work with train companies significantly to improve this situation. The department is already discussing the issue of simplified fare structures with the association of train operating companies.

However, it is important to distinguish perception from evidence. The government believes that the evidence points to rail offering competitively priced fares in a range of markets that stand good comparison to the cost of travel by other modes. It shows that operators are increasing revenues through volume growth rather than any pricing up of captive markets. And it shows that with over 40% of revenues regulated, and over 40% of rail funding coming through direct subsidy, the government is already providing significant support towards the affordability of rail travel. We now have the fastest growing railway in Europe

Britain's railways are playing an increasing role in UK transport, with over a billion passenger journeys a year, in excess of a 40% increase over the last decade. After some difficult times, performance is steadily improving. Passenger numbers are continuing to increase, passenger satisfaction with the quality of the service is rising and investment is at record levels.

The government response to the transport select committee discusses this topic in more detail.

Recommendation 45. Given that the railways are such important customers of power companies, the industry could make a significant contribution to expanding renewable energy generation in the UK. The Department should act to enable it to do so. At the same time, now that service levels of the network have regained stability, the Department should look to addressing barriers to improved energy efficiency. (Paragraph 108)

The DfT is exploring with the Office of Rail Regulation the extent to which enabling the railway to make greater use of renewable electricity could form part of a wider set of initiatives to reduce rail energy consumption and overall costs.

On the point about addressing barriers to improved energy efficiency, the DfT is working with the rail industry – Network Rail and the Train Operating Companies in particular - to speed up the wider delivery of regenerative braking.

Recommendation 46. There are clear advantages in terms of carbon emissions of shifting freight from road to water, and the Department for Transport needs to do more to actively encourage this shift. (Paragraph 110)

The Government's approach to reducing the environmental impact of freight transport is to allocate grants from the Sustainable Distribution Fund, which is designed to fund the best environmentally-friendly freight programmes - be they rail, road or water freight.

While we recognise there are potential environmental benefits of shifting freight from road to water, there are no reliable forecasts of the realistic potential for this.

We have to recognise that road is, and will continue to be, the predominant mode for freight transport and that the largest environmental benefits can therefore be delivered by measures focusing on reducing the impact of road freight.

Recommendation 47. We urge the Government to lead the international community in drawing attention to carbon emissions from international shipping, and to make sure they are brought under an effective reduction regime in the post-Kyoto phase. The Government should work to achieve earlier progress by pressing for an effective EU strategy on reducing emissions from shipping at European ports, and for bilateral agreements on taxation of shipping fuel with other Member States. As a first step, the Government should press the European Commission to give greater prominence to publishing annual figures on emissions from international shipping, both aggregated for the EU as a whole and by individual countries. (Paragraph 111)

The UK is working through the International Maritime Organization (IMO) to tackle shipping emissions.

We have both promoted new guidelines for indexing CO₂ emissions from shipping and taken a lead role in the debate on emissions trading.

Recommendation 48. Sadly, little has changed for the better since EAC's last report on aviation. Progress on introducing financial mechanisms to reduce the growth in emissions from flying is slow, and both the Government and the industry are as intransigent as ever. We urge the Department to widen the terms of its current progress review of the 2003 Future of Aviation White Paper into a fundamental rethink of its airport expansion policy. (Paragraph 113)

To claim little has changed on aviation since the Committee's last report fails to recognise the considerable effort and resource expended to achieve the successful outcome of the UK Presidency of the EU last year. The Government secured agreement in Europe that including aviation in the EU ETS seems to be the best way forward, and the Council called on the Commission to come forward with a legislative proposal by the end of 2006.

The White Paper set out for the first time a strategic framework for the sustainable development of air travel in the UK for the next 20 - 30 years, allowing the industry to plan ahead, whilst at the same time dealing with the impacts of increasing air transport for the environment.

In developing the *Future of Air Transport* White Paper, full consideration was given to the economic, environmental and social aspects of aviation. Its conclusions were informed by a range of detailed studies, rigorous analysis and extensive public consultation, and we stand by the approach that it takes.

While the Government has concluded that there is a need for some additional airport capacity so that the economic and social benefits of air travel to the UK can be realised, the White Paper also set out where more action was needed to reduce and mitigate the environmental impacts of aviation and to ensure that, over time, aviation meets the external costs it imposes on society.

Three years on from publication of the Air Transport White Paper we are making progress to address environmental issues, but there is still a lot of work to be done. We outline the progress made in introducing financial mechanisms to reduce the growth in emissions from flying, in our responses to questions 52 and 53.

The DfT expects to publish a Progress Report on the policies and proposals set out in the White Paper by the end of 2006. This will not be a review of the White Paper policies which we remain committed to. We would expect the report to give an account of developments since publication of the White Paper, and to set out what remains to be done in implementing the strategy.

Recommendation 49. The Government is right when it acknowledges that flying is a big contributor of carbon emissions and therefore to climate change, in addition to its negative contribution to air quality and noise pollution. But what this means is that while the aviation industry can be allowed to thrive and even to grow, this can only take place within strict limits. We note the proposal of the Aviation Environment

Federation, that demand for flights be managed to ensure that emissions from UK aviation remain constant in absolute terms, by limiting growth in passenger numbers to no more than the rate at which the industry improves its fuel (hence carbon) efficiency, currently some 1-2% a year. We would support such a proposal if it could be guaranteed to prevent an absolute rise in emissions. The Department should implement demand management measures straightaway; but to develop its use of such policies, it should commission and publish research on demand management policies which would generate predictable levels of passenger numbers and emissions outcomes. (Paragraph 114)

We believe that *Future of Air Transport* White Paper contains a balanced package of measures and proposals, setting out a long term strategy for the aviation sector. The White Paper acknowledges that building more and more capacity to meet demand would not be a sustainable approach, which is why it supported only two new runways in the South East rather than three.

The White Paper made clear that although the UK's commitment to reduce emissions is economy wide, it was recognised that targets could not apply equally to each individual sector, and circumstances would differ depending on factors such as underlying growth in demand, trends in technology, and the potential for using alternative fuels.

We remain of the view that emissions trading is the most economically efficient and environmentally effective way for aviation to contribute to our climate change goals.

Recommendation 50. Even under the Government's own and most optimistic projections, every other sector of the economy would have to cut its share of UK emissions, while that of aviation would be assisted to almost quintuple. Given that these are both "best case" figures and do not take into account radiative forcing, this is likely to be a very substantial understatement of the actual figure to which the Government's current expansion policies are leading. Power companies, manufacturers, retailers, households, motorists and hauliers are already going to have to make significant efforts to decarbonise their lives and livelihoods. If the Government continues in its policy of allowing just this one industry to grow, it will either cause severe pain to all other sectors or provoke so much opposition as to fatally undermine its 2050 target. If their joint PSA target is to mean anything, the Department for Transport must work with the Department for Environment, Food and Rural Affairs to construct a new approach to aviation which constrains its future growth. (Paragraph 116)

We have responded to a number of detailed queries from the Committee about our forecasts, and have repeatedly stated our willingness to clarify our figures. We recognise that there is a range of forecasts both more and less negative than our own, which are based on different assumptions relating to growth, the role of technology and infrastructure. We will continue to regularly publish data on air travel and to update traffic forecasts in the light of trends.

The Government is fully aware that the climate impact of aviation goes significantly beyond that from its CO₂ alone – this was made clear in the White Paper, where we used figures for future forecasts that included a radiative forcing factor. We are supporting

research in the UK and at the European level to develop a more rigorous scientific basis for assessing the precise impacts of these non-CO2 impacts.

International aviation remains outside the scope of the reductions agreed under the Kyoto protocol. Similarly, our PSA target focuses on domestic emissions and domestic emissions reductions. However, the international dimension of civil aviation's environmental impact is addressed through the International Civil Aviation Organisation's (ICAO) environment committee, CAEP, in which DfT, supported by DTI and DEFRA promote appropriate environmental standards for the industry. And we have made clear that we will ensure that the aviation industry is encouraged to take account of, and where appropriate reduce, its contribution to global warming, and we are taking forward work on this in close collaboration with the Department for Environment, Food and Rural Affairs.

Recommendation 51. While we acknowledge the significant potential benefits of including aviation within the EU ETS, there remain very considerable uncertainties to be resolved before we can have confidence that such benefits would actually be realised. This underlines the need for the Government to step up still further its negotiations with European partners—and to take much bolder action unilaterally in the meantime. (Paragraph 122)

The Government agrees with the Committee that there are significant potential benefits to including aviation within the EU ETS. Emissions trading has the key advantage of delivering a specified environmental outcome in the most economically efficient way possible.

The UK Government continues to play a leading role internationally in promoting the inclusion of aviation in emissions trading schemes. We recognise however that the need for consensus amongst the participating states in the International Civil Aviation Organisation means that progress is likely to take time.

Within Europe, we made the inclusion of aviation in the EU ETS a priority of our recent Presidency of the European Union. In December 2005, under our chairmanship, the EU environment council agreed that emissions trading seemed to be the best way forward. The European Commission is taking forward work to develop the details of how aviation emissions trading will work, with a view to publishing draft legislation by the end of 2006. We will continue to support and encourage the Commission in meeting this deadline, and will be looking to maximise subsequent progress.

The White Paper made clear that we reserve the right to act alone or bilaterally with like minded partners if progress towards agreements at an international level proves too slow. The White Paper also stated as a matter of principle that any additional action to tackle the environmental impacts of aviation will take full account of the effects on competitiveness of UK aviation and the impact on consumers. An approach that arbitrarily constrained the UK air transport industry could potentially cause lasting harm to the UK economy and the interests of the travelling public without delivering the worldwide benefits which both the Committee and the Government wish to see.

Recommendation 52. On the timing of inclusion of aviation in the ETS, we noted that the Secretary of State would not give an opinion on when he thought it would happen, but merely confirmed that it was still the Government's "ambition [...] to try and secure that entry from 2008 or as soon as possible thereafter." Indeed, the Secretary of State himself drew attention to ongoing opposition to the inclusion of aviation in the ETS from European airlines and governments. We also learned that the Government has not even begun to talk to the UK aviation industry about what level of carbon allocations it should receive within the ETS. While we commend the very significant leadership which the Government has shown in raising this issue up the European agenda, the evidence we have received suggests that inclusion of aviation within the ETS is still several years away. (Paragraph 123, 124)

We thank the Committee for its recognition of the leadership shown by the UK Government in driving forward the aviation emissions trading agenda. We generated consensus in favour of emissions trading during our Presidency, and have since been working to maintain momentum on this issue. We were actively engaged in the European Commission Aviation Working Group, drawing on a range of UK stakeholder views.

The Commission have committed to come forward with a legislative proposal by the end of this year. We will continue to press for aviation inclusion in the EU scheme from 2008 or as soon as possible thereafter, but we recognise that we cannot guarantee what progress will be made through the various EU procedures by that date.

Recommendation 53. This highlights the need for the Government to start actively preparing a "Plan B" for dealing with CO₂ from UK aviation. However, when we pressed the Secretary of State on what this alternative plan was, he claimed that even to hint at what and when it might be would undermine the Government's efforts to persuade other EU governments to agree on inclusion of aviation in the ETS. We fundamentally reject this argument. Indeed, we would argue that to publish proposals and a timetable for UK action (to be taken if the ETS route were taking too long) would actually increase the pressure on all parties to agree to an early inclusion of aviation in the ETS. The Department should publish such a timetable and set of proposals as soon as possible. (Paragraph 125)

We are expecting a legislative proposal from the Commission by the end of this year. We are working to maintain this momentum and explore how best to make this policy work in practice. Given where we are in the process and given the excellent progress made during our Presidency of the EU, now is not the time to be speculating publicly about failure or delay, or what alternatives we might turn to.

Recommendation 54. It is scandalous that governments around the world have failed to grasp the nettle of taxing aviation fuel. It is equally scandalous that no Member State within the EU charges VAT on international air tickets. While this would require co-ordination across the EU, individual States are free to impose VAT on domestic tickets. Beyond this, in 2001, the Government made reforms to Air Passenger Duty (APD) which had the effect of cutting the tax on most short-haul flights from £10 to £5. Budget 2006 froze APD for the fifth year running with its only reform being to cut the tax on economy flights to Croatia by £15. (Paragraph 126)

and

55. The Government has no excuses for not raising Air Passenger Duty. When we have recommended this in the past, the response has been that APD is a "blunt instrument" that does not differentiate between the relative carbon-efficiency of different flights. Our response to this is that APD could be levied per flight, rather than per passenger. Above all, however, whether reformed or not, APD should be raised so as to slow the growth of aviation and stabilise its absolute level of emissions. (Paragraph 130)

We recognise that the exemption of aviation from fuel tax is anomalous, but unilateral action is difficult as this exemption stems from international obligations.

Based on the principles set out in the 1944 Convention on International Civil Aviation (the "Chicago Convention"), almost all bilateral agreements include standard provisions exempting the airlines from national taxes and customs duties on a range of aviation-related goods, including parts, stores and fuel.

At the latest Assembly the policy on the exemption of aviation fuel from taxation was called into question by a number of member states, including the UK, and this is now reflected in the ICAO Assembly Resolution on environmental policies and practices. However, the great majority of ICAO's member states still oppose any change.

The UK continues to argue for change on an international level in this area. For the last 18 months, whenever we meet another country to negotiate a new bilateral air services agreement, or changes to an existing one, the UK (as with other EU member states) has sought to introduce an exception to this provision that would allow the UK to apply fuel taxes (on a non-discriminatory basis) for intra-EU flights should we wish to do so. So far we have succeeded in around 30 cases. However, as the European Commission noted in their communication on aviation and climate change, it is difficult to avoid discrimination as long as some carriers continue to enjoy tax exemptions under air services agreements. As the process of renegotiating these bilateral agreements will inevitably take time, application of energy taxes to aviation cannot be relied upon as the key pillar of a strategy to combat the climate change impact of aviation in the short and medium term.

Without international agreement on the issue, market and environmental distortions could result, such as the carrying of extra fuel to avoid tax, which would lead to increased emissions. A unilateral approach to aviation fuel tax would therefore not be effective.

All passenger transport within the UK and to destinations outside the UK is zero rated for VAT. Any decision to levy VAT on air transport would need to be considered carefully to ensure it complied with EU law, and took due account of external pressures on the airline industry. Any unilateral action in charging VAT on international flights would apply only to UK flight segments, and would therefore have limited impact.

Recent Air Passenger Duty decisions have been taken in the light of oil price volatility. Croatia has been added to the list of European destinations as an applicant country to the EU, ensuring a consistency of treatment. All taxes are of course kept under review as part of the normal Budget process.

The UK Government's priority remains to ensure aviation's inclusion in the EU emissions trading scheme and it continues to push for this within the EU. We have also said that we will continue to explore and discuss options for the use of other economic instruments for tackling aviation's greenhouse gas emissions. The Government has undertaken talks with other Member States to consider how best to assist the Commission in its intention to provide a legislative proposal on aviation, and will continue to work to secure further progress.

Recommendation 56. At the same time, we welcome the Secretary of State's acknowledgement of the potential role that differential landing fees could play, and urge him to introduce them. They could be used to complement a reformed and increased APD, in that they could specifically target the fuel efficiency of different models of aircraft. (Paragraph 131)

The Civil Aviation Bill includes provisions that will enable licensed aerodromes to fix their landing charges by reference to aircraft emissions. The Bill would also enable the Secretary of State to require an airport to fix its charges in this way. The Government's intention in bringing forward these provisions (which fulfil the commitment made in *The Future of Air Transport* White Paper) is to enable landing charges to reflect the impact of aircraft on local air quality in the vicinity of an airport, where there are local air quality problems. [The House of Commons will next consider the Bill on 12th October]. In the meantime the Government sees merit in individual airport operators modifying their charges to take account of local air quality impacts.

We currently have no intention to apply such charges to CO₂ emissions. The Committee may be aware that the concept of greenhouse gas related charges is opposed by the majority of states in the International Civil Aviation Organisation, while the ICAO Assembly has specifically endorsed emissions trading.

Recommendation 57. The Government has the power to increase taxes on domestic flights: it should do so, and as soon as possible. It should further work to conclude bilateral agreements with European partners to levy additional taxes on flights between them. Revenue generated as a result could be put towards investment in improving rail services, including high speed rail links, and to accelerating the development and introduction of more energy efficient aircraft designs. (Paragraph 132)

Whilst it is legally possible to impose fuel tax on domestic services, this would only cover a small part of the market and would adversely affect outlying regions. The risk is that, as already mentioned, it would lead to market and environmental distortions.

Internationally, as noted above, the UK has over the last 18 months successfully renegotiated around 30 bilateral air services agreements. However, this cannot be relied on as the key plank of the Government's strategy, and the Government's priority remains to ensure aviation's inclusion in the EU emissions trading scheme.

On the second point raised by the Committee: the Government is dealing with the problems caused by decades of under-investment in transport. The Government has introduced significant increases in transport spending (4.5% in real terms in the Spending Review 2004 years). Additionally DfT were granted a Long Term Funding Guideline in

Spending Review 2004 which assumes transport expenditure will increase in line with GDP growth.

The Government is currently spending the equivalent of £260m per week on transport. By 2007, transport spending - after inflation - will be over 60% higher than in 1997. By 2015 it will double 1997 levels again (in real terms).

Private and public investment in the rail industry is continuing to run at a very high level with some £5.4 billion of investment going into the rail industry in 2004/5. This investment has delivered new rolling stock and major infrastructure projects such as the West Coast Main Line upgrade and the Channel Tunnel Rail Link. This is in addition to a number of smaller schemes designed to increase the capacity and improve the operational performance of the railway. This recent increase in investment will allow spending on rail to return to the level necessary to maintain and build on the improvements that have been achieved so far.

And finally, on the third point raised by the Committee: the Government's commitment to supporting technological developments to address the environmental impact of air transport is recorded in the *Future of Air Transport* White Paper. The Government, in conjunction with the industry, has adopted stretching European targets (from the EC Advisory Council for Aerospace Research in Europe) for environmental performance of new aircraft and engines by 2020. We continue to maintain pressure for technological development through national strategy research support and through work in international fora.

On the same issue the DTI's Aeronautics Research Programme continues to support the development of environmental technologies that will contribute to the sustainability of civil aviation. In addition, government-sponsored research into the impact of aviation emissions will reduce the uncertainties related to the climate and local air quality effects of emissions, such that possible international solutions, appropriate for this wholly international industry, can be developed for the long term. Any UK funding must be seen in the broader international context of substantial EU and NASA programmes.

In the UK, DTI is working with industry through the National Aerospace Technology Strategy to ensure that the aerospace sector develops the technology to remain globally competitive whilst addressing aviation's environmental performance – this being a key driver for the industry. DTI is supporting a number of large industry-led technology validation programmes such as the 3 year £35 million Integrated Wing programme and the 5 year £95 million Environmentally Friendly Engine programme which addresses validation of a number of technologies in aircraft engines with the aim of reducing emissions. These, together with support for a number of smaller research and technology projects and support for a number of aerospace innovation networks which address themes such as aerodynamics, advanced materials and structures at the research level, represent a sizeable government commitment to helping the aerospace sector respond to the environmental challenge. Whilst it may take time for these research developments to enter the global aviation fleet, they will in future make a positive contribution to emission reductions from the aviation sector.

Research into aviation safety and air traffic management (ATM) is sponsored and supported by the relevant agencies: CAA, NATS and Eurocontrol. Aviation security research is part of a separate programme. The Aviation Directorate's current research is focused on aircraft emissions and noise. Much of the research is undertaken as part of broader EU funded research programmes. The guiding principle has been that research is pursued primarily by the agencies (Eurocontrol, CAA and NATS) or by the industry with DfT strategy focused upon filling gaps in environmental and health research to facilitate policy development.

Recommendation 58. We heard from BAA that airport vehicles are allowed to run on "red diesel"—taxed at 6.44p a litre—because they do not run on public roads, even though airports are major sources of both carbon emissions and air pollution. This anomaly should be ended forthwith. (Paragraph 133)

The entitlement to use rebated gas oil (red diesel) in vehicles relates to whether these vehicles use the public road or where such use does occur, whether it is incidental or occasional. Those vehicles entitled to use red diesel are set out in Schedule 1 of the Hydrocarbon Oils Act 1979. The Schedule is currently being reviewed to improve transparency and remove ambiguity. It is not envisaged that the status of airport vehicles will be changed. Such a change would not meet the criteria set out above, and would deliver minimal carbon savings.

The Government offers a range of duty incentives to support increased up-take of low emissions vehicles, from reduced rate Vehicle Excise Duty for alternative fuel cars and the zero rate for cars emitting less than 101g/km CO₂, to the duty differential on Road Fuel Gases.

A strategy towards sustainable development of UK aviation was launched in June last year. The strategy includes a number of measurable goals and best practice that each sector of the industry has agreed to achieve in order to balance future growth in the industry with the needs of the environmental and social responsibilities. A progress report will be published later this year. One of the commitments in the strategy was to 'deliver continued improvements in airport ground vehicles, supply of ground power services, operational practice and the availability of cleaner fuels, in order to reduce NO_x emissions'.

Recommendation 59. The Government should study how best to raise public awareness of the climate change impacts of flying, and of the undesirability - and ultimately impossibility - of ongoing increases in flights within a declining carbon budget. As part of this, the Department should force airlines which operate services from and within the UK prominently to display (eg, on all their adverts, tickets, and webpages) a fuel efficiency label, similar to that for new cars, based on the average fuel efficiency of their entire fleet which flies out of UK airports. Additionally, wherever airlines advertise the routes which they operate from the UK, they should be compelled to state the relevant carbon emissions per passenger—according to a nationally-set methodology for calculating them - alongside the fare. (Paragraph 135)

The Government agrees with the Committee on the importance of raising awareness of the impact of individual actions on climate change. The DfT has recently published an

evidence base review which captures the current state of play on public knowledge and understanding of transport's contribution to climate change, and how this relates to public attitudes and behaviour. The review highlights that public awareness and understanding of climate change and its link to individual behaviour is limited. Important research will commence later this year to allow us to understand more fully how the public currently engage with climate change in relation to personal travel choices. This research will inform the DfT's continuing efforts in raising public awareness of the climate change impacts of travel choices.

Specifically in relation to aviation, the Commission for Integrated Transport is currently undertaking research to investigate public attitudes and understanding of the linkages between air travel and climate change. This research will identify the key drivers to changing attitudes and behaviours.

We currently have no plans to compel airlines to state carbon emissions per passenger. However, we note that several airlines are now voluntarily providing offsetting options to passengers.

The Government supports any robust and accurate initiatives by the industry to promote good environmental practice. The industry's current Sustainable Aviation strategy is due to publish a first progress report later this year and we hope to see signs of substantial progress in this.

Recommendation 60. We welcome the Government's new commitment to offset all its air travel through the new Government Carbon Offsetting Fund. Equally, we share its enthusiasm for voluntary offsetting schemes. Given that offsetting payments are relatively cheap, help to tackle climate change, and can be used to improve the lives of deprived communities in the developing world, the Government should make them a compulsory charge on all airline tickets. It is important, however, that this is accompanied by rigorous auditing of the projects funded as a result. Moreover, the public should not be encouraged to think that offsetting implied that growth in aviation emissions was environmentally tenable. (Paragraph 137)

The Government believes that carbon offsetting can help raise awareness of the impact of transport on climate change. It is not a substitute for the Government's wider policy on aviation. We believe the best way of ensuring that aviation contributes towards the goal of climate stabilisation will be through a well-designed open emissions trading regime. But offsetting has potential as a complimentary interim measures for tackling the climate change impacts from aviation.

In its own offsetting schemes, the government prefers to purchase Certified Emissions Reductions as we recognise the United Nations Framework Convention on Climate Change (UNFCCC) and the Clean Development Mechanism (CDM) as the highest internationally agreed standard for emission reductions. The government is aware of the rapid growth in carbon offsetting providers in the voluntary market and we would encourage them to adopt measures such that the assessment of their emission reductions mirrors the CDM process to ensure the integrity of the voluntary offsets being offered. New quality standards are being developed to fill this need on the project side, and the

government is monitoring the progress being made. In addition, we are seeking to develop a complementary standard to provide buyers with appropriate assurances regarding the quality of offsets.

We agree with the Committee that carbon offsetting is not a substitute for reducing emissions at source but is the 'next best' solution for mitigating remaining emissions from essential official travel after all practical steps have been taken to reduce the need for travel; is a means of raising awareness of travel climate change impacts and the choice of less carbon intensive alternatives; and is consistent with UK policy that the environmental impact of the aviation industry should be reflected in the cost of air travel.

Recommendation 61. We welcome the Government's commitment to keep its assessment of the radiative forcing (RF) of aviation under review, as further scientific evidence becomes available. This is particularly welcome, given that the paper it relies upon states that, depending on the results of further study into the effects of cirrus clouds, "It is possible that the total aviation RF could be twice as large as the total RF given here." In its current progress review of the Future of Aviation White Paper, the Department should clearly state how it proposes to alter its aviation policies, should further research indicate that the effects of cirrus clouds are indeed so large. (Paragraph 140)

The Government is aware that aviation induced cirrus cloud is potentially a significant climate change issue. Current scientific knowledge suggests that there is a fairly small effect but with a large attached uncertainty band. Research is in hand to improve understanding. UK scientists are engaged in the EC QUANTIFY project which is addressing the subject and the Government is funding linked research. Contrails and aviation induced cirrus is also being looked at in the EC ATTICA science assessment - effectively updating the 1999 Intergovernmental Panel on Climate Change (IPCC) Special Assessment on Aviation and the Global Atmosphere - over the next three years.

Until we are clearer about the impacts, we consider it premature to alter our policies, but we will keep this under review as scientific understanding develops.

Recommendation 62. We note that while CCP 2006 cites several examples of international co-operation with developing economies, designed to help them make carbon reductions—it does not mention any projects designed to help other countries reduce their emissions from *transport*. The Government must work with international partners to develop such projects on a wide scale. (Paragraph 141)

The DfT is actively engaged in taking forward policy on tackling transport emissions in a range of international forums, including the European Union, the International Civil Aviation Organisation (ICAO), the International Maritime Organisation (IMO) and the European Conference of Ministers of Transport (ECMT - now the International Transport Forum).

For example, in both ICAO and IMO we are a leading voice in promoting the value of emissions trading schemes - and in May 2006 the Secretary of State spoke to the ECMT on the scale of the challenge facing transport in terms of both climate change and congestion.

Recommendation 63. There are conflicting views in the "peak oil" debate. We would observe, however, that even if the Government's projections of conventional reserves extending to 2030 are correct, this is still quite a short time, given transport's current 99% reliance on oil, and the lifetime of major infrastructure projects. While the Government also projects that improved technology and unconventional reserves could extend this period by another 30 years, we are concerned that the recovery and refining of such reserves could itself lead to higher "well-to-wheels" emissions. All this speaks of an extra imperative for the Department to make a step-change in funding and policies to wean the UK off the use of fossil fuel oil. The Government should commission its own equivalent to the US Hirsch Report, and study the example of the Swedish policy to reduce oil use by 2020. (Paragraph 149)

Our view is that global production of oil will not peak before 2030, provided sufficient investments are made. This is consistent with the view of the International Energy Agency (IEA), most other governments and the oil industry itself.

Earlier predictions of a peak do not adequately take into account lack of technological development of various fields. In particular, a number of OPEC producers have held back development to support global oil prices and also protect the country's main revenue source for future generations

Peak Oil also assumes historical exploration activity, and although reserve additions from discoveries of new oil fields have fallen sharply since the 1960s, this is largely the result of reduced exploration activity in those regions with the largest reserves.

Reserve growth from existing fields and new discoveries continue to exceed annual production. BP's estimate of proven global reserves continues to increase each year and at the end of 2004 was 50% higher than at the end of 1984.

Ultimately, market mechanisms will ration the remaining global supplies of oil (and gas) and incentivise a shift to alternative sources of energy. But governments need to take appropriate action in support of this and to promote energy efficiency.

As set out in the Energy White Paper, UK Government is already putting in place policies that will help ease the UK economy away from power supplied primarily through fossil fuel supply as well as bringing about reductions in carbon dioxide emissions. Such issues are being considered as part of the Energy Review.

The Government is aware of the Hirsch report and other countries' work in relation to peak oil and continues to monitor the developments with interest. We are therefore confident that our policies are consistent with the generally accepted scientific and economic knowledge in this area.

Furthermore, the Renewable Transport Fuel Obligation will go some way towards lessening the transport sector's dependence on oil by requiring that 5% of road transport fuel comes from renewable sources by 2010. The Government intends the level of the Obligation to rise above 5% after 2010 provided certain criteria are met. These are:

- development of robust sustainability and carbon standards for biofuels to ensure they are delivering carbon savings without damaging sensitive habitats,
- development of new fuel quality standards at EU level to ensure existing and new vehicles can run on blends higher than 5%,
- and costs being acceptable to consumers

Recommendation 64. Growing political pressures over the need to reduce carbon emissions, the possibility of a sharp and prolonged fuel shock following peak oil, the complications caused by the development and rolling out of new fuels and technologies, and the potential divergent economic outcomes that follow rapid change to transport and communications, are projected to put transport at the very heart of public policy. The Department should closely examine the findings of the Intelligent Infrastructure Systems programme, in terms of both measures that could be taken to reduce carbon emissions, and ways of winning public support for them. (Paragraph 150)

Recommendation 64. Growing political pressures over the need to reduce carbon emissions, the possibility of a sharp and prolonged fuel shock following peak oil, the complications caused by the development and rolling out of new fuels and technologies, and the potential divergent economic outcomes that follow rapid change to transport and communications, are projected to put transport at the very heart of public policy. The Department should closely examine the findings of the Intelligent Infrastructure Systems programme, in terms of both measures that could be taken to reduce carbon emissions, and ways of winning public support for them. (Paragraph 150)

As the sponsor department, DfT has been closely involved in the development of the Foresight Intelligent Infrastructure Systems (IIS) project and has taken the lead in ensuring it informs government policy-making on transport and sustainability. Dr Stephen Ladyman, Minister of State for Transport, launched the project in January 2006 and since then DfT has held a series of cross-government workshops to consider its implications for transport and other policy areas.

The IIS project aimed to produce challenging visions of how science and technology might be applied to develop intelligent infrastructure for the transportation of goods and people. It commissioned science reviews from leading experts to look at what would become technologically possible in the next half-century, and considered how this could change the sustainability of the way in which people live and travel. It also developed four possible scenarios for what the world will look like in 2050 according to the technology available and the degree to which society accepts it.

DfT recognises the value of this work and welcomes the public interest and debate it has generated on how transport policy contributes to sustainability. Raising public awareness is crucial for achieving DfT's environmental objectives. The project has stimulated thinking about the impact of individual travel choices on the environment, and different possible solutions for reducing it in the future, from low-carbon energy to managing carbon demand.

In the policy context, the project is useful for testing the robustness of current strategy, and the department has assessed its own objectives in light of the scenarios. Through the cross-

departmental workshops it has also sought to ensure that long-term strategies on transport, land-use planning and climate change are joined up.

Other stakeholders such as local and regional authorities, business groups and industry associations have also pledged to consider the implications of the IIS findings on transport and sustainability for their work. The Minister of State will review progress as part of the project's One-Year Review in early 2007.

Recommendation 65. As this report sets out, transport is both the most technically difficult sector in which to reduce carbon emissions and also the most politically difficult. Indeed, the latter is a result of the former. Significant cuts in emissions from transport also require widespread behavioural change. Such change challenges one of the very keystones of modern society - the deeply cherished and ever-expanding sense of personal freedom and mobility that has followed the increasing affordability of both driving and flying but which involves profligate consumption of energy. (Paragraph 151)

Understanding travel behaviour and how to influence travel choices is a particularly complex area. New DfT research due to start later this year will enable us to understand the barriers and incentives to behavioural change, which could result in reducing carbon emissions from personal travel behaviour.

At the same time, we have to recognise that the ability to travel offers all of us very real benefits and extending mobility is important in building an inclusive society. The transport system helps to underpin the international competitiveness of the economy. But mobility comes at a cost, whether financial, social or environmental. We need to ensure that we can benefit from mobility and access while minimising the impact on other people and the environment, now and in the future.

Recommendation 66. Governments at home and abroad must urgently inform the public about the reality and dangers of climate change, and the measures we can all take to avert it. We do not underestimate the problem which this poses for any elected politicians. This underlines the need, as this Committee has consistently argued, for a cross-party approach to the important and difficult measures necessary to tackle climate change. In taking forward the recent Energy Review and switching the focus of transport policy, we urge the Government to show courage in challenging popular preconceptions in order to serve the people's long term interests. (Paragraph 152)

The Government recognises the importance of informing the public about the reality and dangers of climate change. Therefore, we have in place and are developing communications campaigns focusing on vehicle purchase, eco-safe driving, and workplace travel planning.

This communications effort is supported by wide-ranging research to better understand the complexity of public attitudes and travel choices in relation to climate change. For example, new research due to start later this year will explore public understanding of and engagement with climate change and it will identify the barriers and incentives to behavioural change. This research will underpin the further development of the DfT's communications activity on climate change.

Formal minutes

Tuesday 7 November 2006

Members present:

Mr Martin Caton
Mr David Chaytor
Mr David Howarth

Mr Graham Stuart
Dr Desmond Turner
Joan Walley

In the absence of the Chairman, Joan Walley was called to the Chair.

The Committee deliberated.

Draft Report (*Transport Emissions: Government Response to the Committee's Ninth Report of Session 2005-06 on Reducing Carbon Emissions from Transport*), proposed by the Chairman, brought up and read.

Ordered, That the Chairman's draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 9 read and agreed to.

Resolved, That the Report be the Twelfth Report of the Committee to the House.

Ordered, That the Government Response be appended to the Report.

Ordered, That the Chairman do make the Report to the House.

The Committee further deliberated.

[Adjourned till Tuesday 21st November 2006 at 10am

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2005-06 Session

First	Greening Government: the 2004 Sustainable Development in Government Report, HC 698
Second	Sustainable Timber, HC 607
Third	Sustainable Procurement: the Way Forward, HC 740
Fourth	Pre-Budget 2005: Tax, economic analysis, and climate change, HC 882
Fifth	Sustainable Housing: A follow-up report, HC 779
Sixth	Keeping the lights on: Nuclear, Renewables, and Climate Change, HC 584
Seventh	Sustainable Development Reporting by Government Departments, HC 1322
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Ninth	Reducing Carbon Emissions from Transport, H C981
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Eleventh	Outflanked: The World Trade Organisation, International Trade and Sustainable Development, HC 1455

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First	Housing: Building a Sustainable Future, HC 135
Second	Corporate Environmental Crime, HC 136
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Fourth	The International Challenge of Climate Change: UK Leadership in the G8 and EU, HC 105 (<i>Reply Cm6617</i>)
Fifth	Environmental Education: Follow-up to Learning the Sustainability Lesson, HC84 (<i>Reply Cm6594</i>)
Sixth	Sustainable Public Procurement , HC 266
Seventh	Pre-Budget 04 and Budget 05, HC 261 (<i>Reply HC 528</i>)

2003-04 Session

First	Annual Report 2003, HC 214
Second	GM Foods – Evaluating the Farm Scale Trials, HC 90
Third	Pre-Budget Report 2003: Aviation follow-up, HC 233
Fourth	Water: The Periodic Review 2004 and the Environmental Programme, HC 416 (<i>Reply, HC 950</i>)
Fifth	GM Foods – Evaluating the Farm Scale Trials, HC 564
Sixth	Environmental Crime and the Courts, HC 126 (<i>Reply, HC 1232</i>)
Seventh	Aviation: Sustainability and the Government Response, HC 623 (<i>reply, HC1063</i>)
Eighth	Greening Government 2004, HC 881 (<i>Reply, HC 1259</i>)
Ninth	Fly-tipping, Fly-posting, Litter, Graffiti and Noise, HC 445 (<i>Reply, HC 1232</i>)
Tenth	Budget 2004 and Energy, HC 490 (<i>Reply, HC 1183</i>)
Eleventh	Aviation: Sustainability and the Government's second response, HC1063
Twelfth	Environmental Crime: Wildlife Crime, HC 605 (<i>Reply, HC 438</i>)
Thirteenth	Sustainable Development : the UK Strategy, HC 624

2002-03 Session

First	Pesticides: The Voluntary Initiative, HC100 (<i>Reply, HC 443</i>)
Second	Johannesburg and Back: The World Summit on Sustainable Development–Committee delegation report on proceedings, HC 169
Third	Annual Report, HC 262

Fourth	Pre-Budget 2002, HC 167 (<i>Reply, HC 688</i>)
Fifth	Waste – An Audit, HC 99 (<i>Reply, HC 1081</i>)
Sixth	Buying Time for Forests: Timber Trade and Public Procurement -The Government Response, HC 909
Seventh	Export Credits Guarantee Department and Sustainable Development, HC 689 (<i>Reply, HC 1238</i>)
Eighth	Energy White Paper – Empowering Change?, HC 618
Ninth	Budget 2003 and Aviation, HC 672 (<i>Reply, Cm 6063</i>)
Tenth	Learning the Sustainability Lesson, HC 472 (<i>Reply, HC 1221</i>)
Eleventh	Sustainable Development Headline Indicators, HC 1080 (<i>Reply, HC 320</i>)
Twelfth	World Summit for Sustainable Development – From rhetoric to reality, HC 98 (<i>Reply, HC 232</i>)
Thirteenth	Greening Government 2003, HC 961 (<i>Reply, HC 489,2003-04</i>)

2001-02 Session

First	Departmental Responsibilities for Sustainable Development, HC 326 (<i>Reply, Cm 5519</i>)
Second	Pre-Budget Report 2001: <i>A New Agenda?</i> , HC 363 (<i>HC 1000</i>)
Third	UK Preparations for the World Summit on Sustainable Development, HC 616 (<i>Reply, Cm 5558</i>)
Fourth	Measuring the Quality of Life: The Sustainable Development Headline Indicators, HC 824 (<i>Reply, Cm 5650</i>)
Fifth	A Sustainable Energy Strategy? Renewables and the PIU Review, HC 582 (<i>Reply, HC 471</i>)
Sixth	Buying Time for Forests: <i>Timber Trade and Public Procurement</i> , HC 792-I, (<i>Reply, HC 909, Session 2002-03</i>)

2000-01 Session

First	Environmental Audit: <i>the first Parliament</i> , HC 67 (<i>Reply, Cm 5098</i>)
Second	The Pre-Budget Report 2000: <i>fuelling the debate</i> , HC 71 (<i>Reply HC 216, Session 2001-02</i>)

1999-2000 Session

First	EU Policy and the Environment: An Agenda for the Helsinki Summit, HC 44 (<i>Reply, HC 68</i>)
Second	World Trade and Sustainable Development: An Agenda for the Seattle Summit, HC 45 (Including the Government response to the First Report 1998-99: Multilateral Agreement on Investment, HC 58) (<i>Reply, HC 69</i>)
Third	Comprehensive Spending Review: Government response and follow-up, HC 233 (<i>Reply, HC 70, Session 2000-01</i>)
Fourth	The Pre-Budget Report 1999: pesticides, aggregates and the Climate Change Levy, HC 76
Fifth	The Greening Government Initiative: first annual report from the Green Ministers Committee 1998/99, HC 341
Sixth	Budget 2000 and the Environment etc., HC 404
Seventh	Water Prices and the Environment, HC 597 (<i>Reply, HC 290, Session 2000-01</i>)

1998-99 Session

First	The Multilateral Agreement on Investment, HC 58 (<i>Reply, HC 45, Session 1999-2000</i>)
Second	Climate Change: Government response and follow-up, HC 88
Third	The Comprehensive Spending Review and Public Service Agreements, HC 92 (<i>Reply, HC 233, Session 1999-2000</i>)
Fourth	The Pre-Budget Report 1998, HC 93
Fifth	GMOs and the Environment: Coordination of Government Policy, HC 384 (<i>Reply Cm 4528</i>)
Sixth	The Greening Government Initiative 1999, HC 426
Seventh	Energy Efficiency, HC 159 (<i>Reply, HC 571, Session 2000-01</i>)
Eighth	The Budget 1999: Environmental Implications, HC 326

1997-98 Session

First	The Pre-Budget Report, HC 547 (<i>Reply, HC 985</i>)
Second	The Greening Government Initiative, HC 517 (<i>Reply, HC 426, Session 1998-99</i>)
Third	The Pre-Budget Report: Government response and follow-up, HC 985
Fourth	Climate Change: UK Emission Reduction Targets and Audit Arrangements, HC 899 (<i>Reply, HC 88, Session 1998-99</i>)
