



House of Commons
Environmental Audit
Committee

**The 2007 Pre–Budget
Report and
Comprehensive
Spending Review: An
environmental analysis**

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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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A list of Reports of the Committee from the present and prior Parliaments is at the back of this volume.

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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 149-II refers to written evidence printed in Volume II, serial number HC 149-II

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Summary

Green taxes

A decade ago the Treasury made a number of bold announcements on environmental taxes. But in 1999 the fuel duty escalator was abolished, and in subsequent years other green taxes were frozen. The net result was that environmental taxes as a proportion of all taxation peaked at 9.7% in 1999 and have declined ever since, falling to 7.3% in 2006. While Budget 2007 signalled a slight renewing of ambition with a range of increases to green taxes, these changes were modest, and in many cases leave respective rates lower in real terms than they were several years ago.

Aviation

The Committee welcomes the reform of Air Passenger Duty into a levy per flight rather than per passenger, as the Committee has recommended in its last two reports on green taxation. However, it is vital that tax on aviation is not just reformed but significantly increased, so as to stabilise demand and resulting emissions. The Treasury should closely examine the merits and practicalities of varying rates by classifying journeys into three bands, 'short-haul', 'long-haul', and 'very long-haul', in order to reflect better the differing magnitude of emissions arising from the longest range of intercontinental journeys.

Motoring

Road transport emissions in England went up by 12% between 1997 and 2006; and the 2006 UK Climate Change Programme Review forecast that increased road transport emissions due to traffic growth over the period 1990–2010 would more than outweigh the entire suite of carbon reduction policies aimed at the transport sector. Some motoring organisations have begun calling for the next planned increase in fuel duty to be scrapped, given the rise in petrol prices due to increases in the price of crude oil. The forthcoming Budget is a test of the Treasury's environmental credibility: it must not defer its planned rises in fuel duty.

Carbon Capture and Storage

If the Government were only going to fund one Carbon Capture and Storage (CCS) demonstration project, it was right to restrict it to a post-combustion coal plant, as this technology could be retrofitted to existing power stations, for instance in China and India. But overall the Government has not shown enough urgency in its approach to CCS, and it is absolutely imperative that the Treasury provide considerably more assistance for the development of this technology in the UK. In order for CCS to be deployed widely and swiftly in the UK, we recommend that the Government introduce some form of financial mechanism for incentivising CCS power plants over conventional power stations.

Shadow Price of Carbon

There appear to be serious flaws in the thinking behind the Shadow Price of Carbon (SPC). The Government has assumed that international action will be taken to ensure that the effects of climate change will be relatively mild, and has therefore set the SPC at a relatively low level. There is a high probability that, by setting a relatively low carbon price, this will fail to discourage the approval of carbon-intensive policies and projects, and thus actually make it harder to achieve the global targets that the Government is assuming will be met.

To redress this, the Shadow Price of Carbon should be increased, by basing it on the projected costs of following a 'business as usual' trajectory of emissions. The Government's first priority should in any case be deciding how potential projects affect UK carbon budgets. Only after that should the cost-effectiveness of different policy options be taken into account.

Environmental Transformation Fund

The Pre-Budget Report (PBR) announced funding for a new Environmental Transformation Fund: over three years, £370m will be spent on low carbon technology in the UK, with £800m being spent on forestry protection and low carbon investments in the developing world. Of the domestic fund, only £170m is new money, and the overall funding is being spread very thin; the urgency of the need to cut emissions means that this should now be a much higher spending priority. The international fund, meanwhile, was probably the most impressive announcement in the PBR. However, the Government should establish rigorous sustainability criteria to cover all investments from this fund, in particular to avoid it being used to fund unsustainable biofuels plantations.

Emissions trading

Some of the emissions savings reported by the Government incorporate the net purchase by the UK of millions of carbon allowances, although the Government does not always make this clear. The Government should always be transparent about where reported emissions figures incorporate the purchase of carbon credits, otherwise it might give a falsely reassuring picture of progress in decarbonising the UK itself. The Government should also do more to verify that the purchase of carbon credits by the UK is funding genuine emissions reductions elsewhere in the world.

Public Service Agreements

The new Public Service Agreement (PSA) on climate change is too diffuse, with no clear departmental targets for reducing emissions, and reduced emphasis overall on reducing emissions from the UK (this is only one of six performance indicators). The Government should consider setting emissions reduction targets for specific sectors of the economy, with relevant departments being made accountable for achieving them. Overall, environmental issues appear to be 'ghettoised'; the Treasury must do more to mainstream environmental policy by reflecting it more strongly throughout the entire range of PSAs.

Conclusion

Although the Pre-Budget Report and Comprehensive Spending Review were published a year after the Stern Review, there was little sign in them that the Treasury was responding on the scale and with the urgency Stern recommended. Furthermore, since the Stern Review was published the science on climate change has continued to harden, with global emissions rising faster than projected; thus the Treasury's lack of urgency stands out as even more remiss. Pre-Budget Report 2008 must establish a coherent set of measures to help deliver the UK's 2020 domestic and EU targets on emissions and renewable energy, and show explicitly what their planned contribution to this delivery will be.

Introduction

1. Since its inception in 1997, the Environmental Audit Committee has carried out annual inquiries into the environmental content of the Treasury's Pre-Budget Reports; this is the eleventh in the series. In these reports, we review the Treasury's approach to the environment, looking in particular at the extent to which it is following the policy it announced in 1997 of shifting the burden of taxation from 'goods' (such as employment) to 'bads' (such as pollution).

2. This year's Pre-Budget Report (PBR) was published on 9 October 2007, together with the latest Comprehensive Spending Review (CSR).¹ The PBR highlighted four key announcements on the environment: an increase in funding for Defra, details of a new Environmental Transformation Fund (to fund low carbon investments in the UK and the developing world), a reform of aviation tax, and publication of an interim report on the future development of low carbon vehicles. One of the main environmental features of the Comprehensive Spending Review was its setting of two new Public Service Agreements (PSAs) for Government departments: "to lead the global effort to avoid dangerous climate change", and "to secure a healthy natural environment for today and the future". Alongside the PBR, the Government announced details of a competition to design and build a demonstration Carbon Capture and Storage project.

3. In addition to our core focus on green taxation, in our reports on the PBR we usually choose a number of other areas to concentrate on. This year we focus on:

- Government support for Carbon Capture and Storage;
- the Shadow Price of Carbon (used by the Government to put a cost on the potential impacts on climate change of different policy options);
- the new Environmental Transformation Fund;
- the transparency of emissions trading; and
- the new set of Public Service Agreements.

Green taxes

Overview: the Treasury's momentum on green taxes

4. Following its announcement in 1997 on shifting the burden of taxation towards green taxes, the Treasury made a number of bold moves, increasing the fuel duty escalator and introducing a range of new instruments (including the Climate Change Levy package, the Renewables Obligation, and the Aggregates Levy). This momentum stalled with Pre-Budget Report 1999, however, when the then Chancellor abolished the fuel duty escalator (FDE). The impact of the abolition of the FDE was compounded by other decisions, such

¹ HM Treasury, 2007 Pre-Budget Report and Comprehensive Spending Review: Meeting the aspirations of the British people, Cm 7227

as the cut in the main rate of Air Passenger Duty (APD) in 2002, and the freeze in Climate Change Levy rates from 2001 to 2007. The result is that green taxes as a proportion of all taxation peaked at 9.7% in 1999 and have been declining ever since, falling to 7.3% in 2006.²

5. The 2006 Pre-Budget Report and 2007 Budget Report appeared to signal a slight shift forward in momentum again, with a doubling of APD rates, increases in fuel duty for the next three years, the raising of Climate Change Levy rates in line with inflation, the raising of Vehicle Excise Duty for the most polluting cars to £400 a year, and increases to Landfill Tax and the Aggregates Levy. There are no figures yet available to show what impact these changes will make to the balance of taxation made up by green taxes. However, in the context of the freezes in several environmental taxes in preceding years these were very modest increases, and in many cases still leave respective rates lower in real terms than they were several years ago.

6. We put it to the Exchequer Secretary that this represented a clear failure on the part of the Treasury to live up to its earlier policy. She made two arguments in reply. First, she stressed that the Government was doing lots of other things beyond taxation to help to change people's behaviour in more environmentally friendly directions; she singled out participation in the EU Emissions Trading Scheme, and an announcement in Budget 2007 to give stamp duty discounts or exemptions to new zero carbon homes. Second, she argued that the very decline in green taxes might be a sign of their success: "if you tax an environmental bad or pollution and prevent it happening one of the results is that the tax take goes down."³

7. We find neither argument impressive. As we have argued previously,⁴ green taxes can do a number of jobs at once: i) deterring activities that are harmful to the environment; ii) incentivising greater efficiency in the use of environmental resources; iii) providing novel tax streams to raise revenue (both for general spending purposes and specifically for environmental improvements); and iv)—as a result of raising new revenue—allowing for tax cuts elsewhere, the meaning hinted at by the original 'shifting the burden' announcement.

8. The Treasury's argument that new or higher green taxes are unnecessary, because the Government is doing enough to protect the environment through other policies, is hardly convincing given the Government's lack of progress in reducing UK carbon emissions over the last decade. Even if it were the case that policy across Government was successfully delivering its environmental objectives in full, it would still not be an excuse for the Treasury's inaction. There is always a case for looking at the scope to increase green taxation, since the Government is always in need of tax revenue, and since, as the Treasury accepts, it is better to tax 'bads' than 'goods'. Taxes on high-carbon activities such as driving and flying can be used to reduce their demand without destroying it, thus helping to achieve environmental objectives while still generating

2 "Environmental taxes", Office of National Statistics, 3 December 2007, www.statistics.gov.uk/ci/nugget.asp?id=152

3 Q145

4 Environmental Audit Committee, Seventh Report of Session 2004–05, Pre-Budget 2004 and Budget 2005: Tax, Appraisal, and the Environment, HC 261, paras 20–30

large and predictable tax streams—which could potentially be used to reduce other taxes.

Table 1 Changes to five key environmental taxes since 2000

Year ¹	Fuel duty	Vehicle Excise Duty	Climate Change Levy	Air Passenger Duty	Aggregates Levy	Landfill Tax
2000–01	Revalorise ²	Freeze	Introduction	Freeze	N/A	Rise to £11/tonne
2001–02	Freeze	Reform (new bands), Cut for smaller cars, Freeze for other rates	Freeze	Reform (avg rate cut)	N/A	Rise to £12/tonne
2002–03	Freeze	Freeze, plus Reform (new lower rate for lower emission cars)	Freeze	Freeze	Introduction	Rise to £13/tonne
2003–04	Revalorise	Revalorise, plus Reform (new lower rates for low emission cars)	Freeze	Freeze	Freeze	Rise to £14/tonne
2004–05	Freeze	Freeze	Freeze	Freeze	Freeze	Rise to £15/tonne
2005–06	Freeze	Freeze for lower emission bands, Revalorise for highest	Freeze	Freeze	Freeze	Rise to £18/tonne
2006–07	Revalorise	Cut for lower emission bands, Freeze for bands D&E, Rise for band F and a Rise / Reform : new band G for highest emitters	Freeze	Freeze until February 2007 , then Rise (doubling all bands)	Freeze	Rise to £21/tonne
2007–08	Rise (2ppl in October 2007)	Freeze	Revalorise	Freeze	Freeze	Rise to £24/tonne

Note:
¹ Changes are listed in the year in which they take effect, rather than the year in which they are announced.
² "Revalorise" means "rise in line with inflation experienced since the previous year".

Source: EAC analysis of Budgets and Pre-Budget Reports 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007; and Supplementary Memorandum from HM Treasury to Environmental Audit Committee inquiry into Pre-Budget Report 2005

9. As for the Treasury's argument that the relative decline in green taxes is a sign of their success in deterring the activities on which they are levied, we would reply overall that it has rather more to do with the Treasury's own decisions to freeze most environmental taxes in most years from 2000 to 2006 inclusive (Table 1: see page 8). Notably, over the period 2000–2005, receipts from fuel duty fell in real terms (following abolition of the FDE), with receipts from Air Passenger Duty falling in absolute terms (following the cut in the main rate of APD); during this time carbon emissions from road and air transport both increased.⁵ **This is not the first year we have heard this argument from a Treasury minister; we are disappointed to hear it yet again, having repeatedly pointed out its obvious flaws.**

10. We are puzzled as to why the Treasury has not been bolder in communicating the benefits of green taxes in order to win greater public acceptance for them. We agree with the analysis of Simon Bullock, from Friends of the Earth:

[...] the main problem has been a selling job because [the Treasury] has not made the link between tax rises on the environmental pollutants and tax cuts elsewhere. [...] Certain elements of the press are always stigmatising environmental taxes as stealth taxes and it will be politically difficult to get them unless they are explicitly linked to tax cuts elsewhere. [...] If the Government were to commit to their statement of intent and deliver its strategy to increase the taxes on aviation, road fuel duty, waste, and the rest of it, explicitly linking it with cuts in things like VAT, national insurance contributions, income tax—taxing pollution not people—it would make it far more politically saleable.⁶

11. We drew the Exchequer Secretary's attention to the findings of a recently formed independent body, the Green Fiscal Commission, whose main focus is "greening the UK tax system".⁷ In late 2007 the Commission published polling data that appeared to show that a majority of the population (51% for, versus 32% against) supported green taxes, and that this support increased markedly (77% for, with only 9% against) if revenue from green taxes was used to fund reductions in carbon emissions and to cut other taxes at the same time.⁸ We suggested to the Exchequer Secretary that to increase support for green taxes, and thus allow for an expansion in their use, what the Treasury needed to consider was a greater use of hypothecation. Her reply was firm:

In Treasury terms it is a terrible word; it is almost banned from the dictionary. [...] I do not sit here and say that in all circumstances hypothecation is always and everywhere bad, but if you get into hypothecation into a big way it means that there are fewer flexible choices as you go forward because money that you may be able to raise in revenue is put away for particular reasons. There are examples of hypothecation, for example the climate change levy and the reduction in National

5 HC Deb, 15 January 2008, col 1092W; Environmental Audit Committee, Fourth Report, Pre-Budget 2006 and the Stern Review, HC 227, para 63

6 Q61

7 Green Fiscal Commission, www.greenfiscalcommission.org.uk

8 "New expert body seeks to break logjam on green fiscal reform", Green Fiscal Commission press release, 14 November 2007

Insurance contributions. [...] That can play a part, but we have to be careful that we do not get ourselves into a circumstance where paradoxically if we are hypothecating large amounts of revenue we cannot achieve what we need to achieve as we shift to a lower carbon-emitting economy.⁹

12. We understand the Treasury's caution over hypothecating revenues from taxes to specific ends. However, it seems clear that an element of hypothecation could play a crucial role in gaining public acceptance of green taxes. It is perhaps unnecessary formally to ring-fence certain revenue streams for particular purposes, which could indeed reduce the flexibility the Treasury has to manage year-to-year public finances. What is more important is that the Treasury does a better job of publicly justifying green taxes by explaining their core environmental purpose, as well as linking them—however strictly—to increased spending on the environment and reductions in other taxes. We recommend that the Treasury consults on, publishes, and follows an explicit strategy to win public support for environmental taxation.

Aviation

13. For several years we have highlighted the failings of Treasury policy with regard to aviation. Aviation is the fastest growing source of greenhouse gas emissions in the UK, its contribution to global warming is enhanced through releasing emissions at altitude, its growth is being fuelled by largely inessential journeys (especially short-haul journeys, where there are rail alternatives), and it is very lightly taxed (notably aviation fuel is untaxed internationally). Despite all this, at Budget 2000 the then Chancellor decided to cut the short-haul economy rate of Air Passenger Duty (APD)—applying to three-quarters of all passengers—from £10 to £5. The same Budget saw an increase in the first/business class rates for short- and long-haul journeys, but these sums were modest (£20 and £40, a tiny proportion of first and business class fares). The overall effect was that in 2005 APD receipts were 5% down from 2000, even while annual carbon emissions from UK flights were up by 16%.¹⁰ **In December 2006 the Treasury announced a doubling of all APD rates from February 2007, which in some parts of the media was reported as a bold move for the environment. In reality for the majority of flights it only restored the rate of aviation tax the Government inherited when it came into office. This represents a cut in real terms (from May 1997 to February 2007) of 29%.¹¹**

14. The 2007 Pre-Budget Report announced that APD rates would be frozen next year, not even raised in line with inflation; further increasing the cut in the main rate in real terms. However, it also contained a major reform, announcing that the basis of APD would be changed, from a charge per passenger to a charge per plane. We had recommended this reform in our last two PBR reports, on the basis that it should incentivise airlines to increase the efficiency with which they fill their flights (and deter them from running empty flights for scheduling purposes), and that it should tax air freight for the first time. We took evidence on this reform from two leading aviation and environment experts.

9 Q149

10 Environmental Audit Committee, Pre-Budget 2006 and the Stern Review, para 63

11 "Table 5.1 – Retail Price Index: long run series: 1947 to 2007", Office of National Statistics, www.statistics.gov.uk/downloads/theme_economy/Focus_on_CPI_December_2007.pdf

Peter Lockley of WWF welcomed the announcement in the PBR; but stressed that it was important that the level of aviation tax was increased, so as to curb demand for flights and resulting emissions. He also suggested that the Treasury should reform APD, so that in addition to the current rates for ‘short-haul’ (all destinations within the EU) and ‘long-haul’ (all destinations outside the EU), a third band is added to cover ‘very long-haul’ destinations, such as Australia.¹² The rationale for this is that, as WWF put it, “The emissions from a trip to Australia are around three times those of a trip to New York, but both are currently classed simply as long-haul.”¹³ (On a similar note, EasyJet recently told the Treasury Select Committee that a passenger travelling from London to Auckland generated more than 15 times the emissions of a passenger travelling from London to Marrakech, yet would be charged the same rate of APD.)¹⁴ Jeff Gazzard of the Aviation Environment Federation, meanwhile, was not in favour of the reform to APD, arguing that it might obscure the personal link between each passenger’s purchase of a ticket and the greenhouse gas emissions for which they would be responsible. Instead he proposed a charge per passenger (or tonne of freight) based on the distance travelled.¹⁵

15. We welcome the Treasury’s announcement to reform Air Passenger Duty into a levy per flight rather than per passenger. We further welcome the Treasury’s announcement of consultation on how this reform should be implemented, and how aviation tax might be better correlated to distance travelled. We recommend that airlines be mandated to calculate each passenger’s share of the reformed ‘per-flight’ tax, and to make this figure highly visible (on adverts, websites, and tickets). We also recommend that the Treasury closely examine the merits and practicalities of better reflecting the emissions arising from longer intercontinental journeys by adding a third banding to Air Passenger Duty, to cover ‘very long-haul’ flights. Short-haul charges must reflect the disproportionate emissions resulting from take off and landing, and should be aimed to encourage ‘modal shift’ towards rail alternatives. Above all, it is vital that all rates of aviation tax are significantly increased, so as to stabilise demand and resulting emissions.

16. A further aspect of aviation and taxation that we have previously examined is the ‘zero rating’ of aviation for VAT, which enables companies in the aviation industry to claim back VAT on a wide range of purchases. Last year we recommended that, as “a first step towards greater public consideration of this issue, and to aid Parliamentary scrutiny, the Treasury should publish figures of the full costs to the Exchequer of reimbursing aviation companies in this manner.”¹⁶ In response, the Treasury said it would be difficult in practice to change the VAT rating of aviation, and thus that it was not worth publishing such an estimate:

Changing the VAT treatment of these services so that input VAT could not be reclaimed would require unanimous agreement by all EU member states. In addition there is likely to be a significant behavioural change as aviation companies seek to

12 Qq 40–2

13 Ev 15

14 Treasury Committee, Fourth Report of Session 2007–08, Climate Change and the Stern Review: The implications for Treasury policy, HC 231-I, para 110

15 Qq 121–2

16 Environmental Audit Committee, Pre-Budget 2006 and the Stern Review, para 73

purchase their products in countries in which no VAT is chargeable on their expenses. In view of these significant obstacles the Treasury has made no detailed assessment of the revenue which would accrue from such a change.¹⁷

17. We are not impressed by this argument. **In view of their potential size, we recommend that the Treasury publish an estimate of the costs to the Exchequer of reimbursing VAT expenses to aviation companies.** In this year's inquiry we heard one estimate, from the Aviation Environment Federation, that the cost to the Exchequer ran to £4 billion a year.¹⁸ **This would be in the public interest, no matter the practical obstacles to changing aviation's VAT status, and might galvanise interest in how these obstacles might be overcome.**

Motoring

18. Although the 2007 Budget Report announced that fuel duty would rise by a cumulative total of nearly six pence per litre by April 2009, it followed this by saying: "By 2009–10, main fuel duty rates will still remain 11 per cent lower in real terms than they were in 1999."¹⁹ In this context, we drew the Exchequer Secretary's attention to a recent speech in which she had said: "Tax has a part to play by influencing behaviour and incentivising low carbon technologies, and as the main way of tackling emissions from surface transport."²⁰ We asked her how, in this case, she could justify cutting fuel duty by so much in real terms over a decade. She responded that:

As with all these things, it is a question of getting a balance from where we are now, which is not ideal, to where we want to go, namely a future [...] where individual cars are a lot less damaging in terms of carbon emissions and people can make other sensible choices about getting round. [...] All of this takes time and we have to balance it.²¹

19. We are concerned by this response, because it suggests a lack of willingness to grasp the problem, in favour of an indefinite postponement of action. The Exchequer Secretary essentially told us that the Treasury could take only light action to curb demand for petrol and diesel in advance of low carbon alternatives which could fully replace them; but that this would take time, and in the meantime environmental concerns could not be allowed to impede economic growth or individual mobility. We would argue that the development and take-up of low carbon alternatives would be assisted by stronger action to curb demand for fossil fuels today. Furthermore, the Government has already had time to tackle this problem, and yet road traffic emissions in England went up by 12% between 1997 and 2006.²² Indeed, the 2006 UK Climate Change Programme Review forecast that increased road transport emissions due to traffic growth over the period 1990–2010 would more than

17 Environmental Audit Committee, Fifth Special Report of Session 2006–07, Government Response to the Committee's Fourth Report of Session 2006–07: Pre-Budget 2006 and the Stern Review, HC 739, p 12

18 Ev 45

19 HM Treasury, Budget 2007, March 2007, HC 342, para 7.36

20 "Speech by the Exchequer Secretary to the Treasury, Angela Eagle MP, at the International Carbon Markets Conference", www.hm-treasury.gov.uk, 14 November 2007

21 Q146

22 HC Deb, 15 January 2008, col 1092W

outweigh the entire suite of carbon reduction policies aimed at the transport sector.²³ We note that some motoring organisations have begun calling for the next planned increase in fuel duty to be scrapped, given the rise in petrol prices due to increases in the price of crude oil.²⁴ We also note, however, that demand for road fuel is still strong in spite of these price rises. Paul Watters, head of roads policy at the AA, has commented: “People appear to be cutting back on other spending, such as car servicing, rather than driving less.”²⁵ **The forthcoming Budget is a test of the Treasury’s environmental credibility: it must not defer its planned rises in fuel duty.**

Carbon Capture and Storage

20. Carbon Capture and Storage (CCS) encompasses a range of technologies for separating the carbon dioxide emitted in industrial processes (chiefly burning fossil fuels in power stations) and sequestering it over the long term—for instance, by liquidising it and pumping it into empty gas fields or saline aquifers—so that it does not enter the atmosphere. The Stern Review highlighted the enormous potential importance of CCS for avoiding dangerous climate change. Stern cited studies which suggested that global deployment of CCS could make up around a third of the worldwide carbon abatement efforts required by 2050, while reducing the costs by possibly two-thirds.²⁶

21. The Treasury has been heavily involved in Carbon Capture and Storage policy for some years, with many of the Government’s announcements on CCS being made in successive Budget and Pre-Budget Reports. With the 2005 Pre-Budget Report the Treasury issued a consultation on the scale and form of a competition for public funding to build a full-scale demonstration CCS power plant. Alongside the 2007 Pre-Budget Report, the Government announced the details of this competition; chief among these was that the scope of the competition would be restricted to a post-combustion coal plant. In such a power station coal would be burnt in the normal way, and the CO₂ stripped by chemical scrubbers from the resulting exhaust gases. The decision to restrict the competition in this way caused some controversy because it excluded potential projects using other technologies (the main current alternative being pre-combustion, in which the CO₂ is stripped out prior to the fuel being burnt). The Exchequer Secretary explained the Government’s rationale as follows:

We decided that we wanted to focus on post-combustion because [it has] the potential to retrofit existing plants [... S]ince we already have plant that is putting a great deal of carbon into the air and that developing countries, particularly China, have a great deal of dirty coal and are building power stations at a rapid rate to supply their own energy needs, retrofit post-combustion seems to us to offer the best chance, if it can be delivered, of maximum abatement capacity which is beneficial in the battle against climate change.²⁷

23 HM Government, *Climate Change: The UK Programme 2006*, Cm 6764, March 2006, p 63

24 “Petrol prices fuelling 7-month inflation high”, *The Daily Telegraph*, 12 February 2008

25 “Huge rise in traffic choking the roads”, *The Times*, 17 January 2008

26 HM Treasury, *Stern Review on the Economics of Climate Change*, October 2006, p 525

27 Qq 174–5

22. If the Government were only going to fund one Carbon Capture and Storage demonstration project, we believe it was right to restrict the scope of the competition to a post-combustion coal plant. We agree with the Government that this type of technology has the greatest global potential, given the possibility that it could be retrofitted to existing power plants. If widely adopted, it could dramatically reduce the emissions of countries such as China and India, while simultaneously providing significant economic opportunities to firms with experience of carrying it out.

23. Another reason for funding a post-combustion demonstration was given to us by Centrica: “pre-combustion has been demonstrated to work at scale. That has not yet been done on post-combustion. [Post-combustion] has still very much only been proven at a small scale.”²⁸ Indeed, both Centrica and the Carbon Capture and Storage Association (CCSA) told us of private sector plans for pre-combustion plants that could potentially (i.e., if the economic conditions were right) be operational as early as 2012–13.²⁹ Regarding post-combustion plants, Scottish Power, though confident of the potential of this technology and entering the competition for the Government’s demonstration project themselves, agreed that: “in order to roll out this capture and storage in China and places like that, it will be important to have post-combustion properly tested and assessed.”³⁰ **Post-combustion technology appears to be further away than pre-combustion from being introduced by the market on its own. This means that funding a full-scale demonstration plant is a particularly appropriate and effective form of subsidy for post-combustion technology. We hope that this demonstration will be able to prove to interested companies that post-combustion plants are physically viable, and teach valuable lessons about how to build and operate them efficiently.**

24. Overall, however, we are still very disappointed by the scale and speed of investment for CCS announced in the Pre-Budget Report. The PBR said of the demonstration project: “This competition will ensure the UK is a world leader in bringing forward this globally important technology for tackling climate change.” But the truth is that CCS is not one technology, but several; and there is the possibility that by funding only one project the Government will be leading UK industry to ‘put all its eggs in one basket’. While post-combustion is obviously appropriate for retrofitting to existing coal plants, we heard from Jeff Chapman, chief executive of CCSA, that the market had not yet established what would be the preferred technology for the next generation of power plants.³¹ It was for this same reason that the UK Energy Research Council, in its submission to the Treasury’s 2006 consultation on the form the CCS competition should take, urged the Government to fund several different demonstration projects.³² Scottish and Southern Energy, meanwhile, told us the Treasury should fund two demonstration plants, one with post-combustion technology and one with pre-combustion. When we put this suggestion to the Exchequer Secretary, however, she was resolute:

28 Q97

29 Q71, Q85

30 Q98

31 Q100

32 “Response to the Treasury consultation on Carbon Capture and Storage”, UK Energy Research Council, May 2006, www.geos.ed.ac.uk/research/subsurface/diagenesis/UKERC_Treasury_CCS_consultation_v_3_2_May06.pdf

If you ask me whether half-way through the competition process we will agree to do pre-combustion as well the answer is no; we are concentrating on a post-combustion project of the sort we have announced.³³

25. Another criticism we heard of the competition was that the specified size and deadline for the plant were too unambitious. The Department of Business, Enterprise and Regulatory Reform (BERR) has set out that the winning project should be built by 2014, and specified its capacity as 300MW (megawatts). It also added that the plant could be built under “a phased approach”: in other words, that the plant could start running as an ordinary coal plant first, before the CCS element was fully operational. So long as some degree of capture, transportation, and storage is demonstrated by 2014, BERR has said that full-scale CCS need only be implemented “as soon as possible thereafter”.³⁴ Scottish and Southern expressed their doubts about the usefulness of the competition, in view of these criteria: “Given the CCS activity worldwide, it is highly unlikely that the UK will be teaching the world anything new in 2014 with 50–100 MW of CCS.”³⁵ Meanwhile, CCSA set this competition in the context of six new ordinary coal plants that are already being planned to be operational by around 2015:

The total of those six projects is 9,000 megawatts and, this is just to put it in context, the demonstrator is 300 megawatts. So in terms of a contribution to the emissions from that fleet of power stations, it is not a very big contribution. I am not sure it was the objective of the Government anyway to make that contribution, but it is not a very big contribution taken in that context.³⁶

26. Indeed, the Government has already taken the projected carbon savings from this demonstration plant into account in its emissions forecasts to 2020—projecting that UK CO₂ emissions will by then be down by 20–26% on 1990 levels, against the national target of a 26–32% reduction by 2020. The Government has acknowledged that more efforts will be required to reduce emissions further by this target deadline.³⁷ However, Jeff Chapman was confident of the ability of power companies to use CCS to deliver significant carbon savings within this timeframe:

If we can accelerate [plans for CCS plants] in a similar manner to the “dash for gas” that took place in the 1990s, we could make a very big impact in the second half of the next decade, towards 2020. We could have a lot of capacity on the ground by 2020 and certainly an awful lot of capacity in the 2020–2030 decade. It all depends on policy.³⁸

33 Q177

34 “CCS demonstrator will put UK ahead in global race for clean coal”, Department for Business, Enterprise & Regulatory Reform (BERR) press release, 9 October 2007

35 Ev 80

36 Q109

37 Uncorrected transcript of oral evidence taken before the Environmental Audit Committee on 4 December 2007, HC (2007–08) 155-I, Q6

38 Q71

27. To be more precise, the key policy issue he—and all our other witnesses from this industry—stressed was the provision of a long-term financial framework to support the extra costs of CCS. Centrica summed the matter up:

In terms of where we are on the financials, because of the uncertainty that is created around the carbon price and the capital expenditure, if one looks, say, at the higher end of the capital expenditure range, then to make a project economic, there needs to be some longer-term support. Whether that is from Government, whether it is from an additional piece of legislation, we are not being definitive on. With the current Emissions Trading Scheme and the uncertainty around the future carbon price, no commercial entity would build a clean coal project today.³⁹

Scottish Power suggested that in the longer term, it might be possible to rely on the EU ETS to provide this financial incentive, but this might be a long wait, during which conventional coal plants would be built, with emissions going unabated. They argued that even once the demonstration plant had been built, there could still be a hiatus before the EU ETS provided a strong enough financial signal for companies to invest in new CCS plants. For this reason, they argued the Treasury would need to step in with some kind of financial instrument to bridge that gap. Jeff Chapman believed the Treasury had several options:

There are several options that could be brought to bear. [...] You could have, for example, a feed-in tariff like there is on renewable energy in some other countries, you could have something like a contract for differences, which is when the Government makes a contract for the difference between the EU ETS allowance price and the fixed price which is bankable, or you could simply have a carbon contract.⁴⁰

28. While the CCS competition is very welcome, it is imperative that the Treasury provide considerably more assistance for CCS projects overall. No matter which type of technology is adopted, CCS plants will incur extra build, operational, and infrastructure costs over conventional power stations. Without clear and long-term financial security for CCS, the risk is power companies will not invest in CCS plants even once the demonstration project is operational—let alone bring forward the plans they have for pre-combustion plants today. In the longer term the EU ETS may be able to provide sufficient financial incentives. But in order for CCS to be deployed widely and swiftly in the UK, we recommend that the Government introduce some form of financial mechanism for incentivising CCS power plants over conventional power stations. The Treasury should examine options such as a feed-in tariff for CCS plants, or contracts which guarantee funding for the difference in costs between CCS and conventional plants.

29. Overall, we are concerned that the Government is not showing sufficient urgency in its assistance to Carbon Capture and Storage industries. As far back as the 2003 Energy White Paper, the Government stated:

39 Q86

40 Q102

We will therefore set up an urgent detailed implementation plan with the developers, generators and the oil companies to establish what needs to be done to get a [Carbon Capture and Storage] demonstration project off the ground. This study will reach conclusions within six months to enable firm decisions to be taken on applications for funding from international sources as soon as possible thereafter.⁴¹

In our report, *Keeping the Lights On: Nuclear, Renewables and Climate Change*, published in March 2006, we commented on the passage above:

It is now three years after this statement was published. The DTI has issued a number of relevant documents over this period, including a review of the feasibility of carbon capture and storage, a paper on implementing a demonstration project, and a carbon abatement strategy. Moreover, the latest Pre-Budget Report announced a consultation on carbon capture and storage. As EAC has noted before in relation to Sustainable Development, the plethora of reports creates an impression of activity whilst progress in ‘learning by doing’ appears minimal. It is scandalous that so little progress in developing clean coal and carbon capture and storage has been made, and even the flagship BP-led DF1 project at Peterhead remains dependent on the establishment of a long-term financial framework which would provide greater confidence to investors.⁴²

It is now two years since our criticism was published, and there has still only been slow progress on the demonstration project and no substantial progress on setting out the financial framework. In this time, as we warned two years ago, BP have withdrawn from their planned CCS project at Peterhead. In taking evidence last year from a senior official at the then DTI we were disappointed by the way in which he appeared to be viewing CCS as just another industrial candidate for R&D investment, rather than a crucial weapon in the fight against climate change.⁴³ **The Government must now be more decisive in its support for CCS, especially given that a number of existing power stations are coming to the end of their lives, and power companies are taking decisions imminently on a new generation of power plants to replace them. Where these can be built with pre-combustion CCS, they will immediately lower UK emissions. Where they are built as conventional gas and coal-fired power stations, the Government must mandate that they are built ‘CCS-ready’, with the expectation and the financial support in place to ensure they are retrofitted with post-combustion technology as soon as possible.**

Shadow Price of Carbon

30. In December 2007 the Government adopted a new calculation of the costs of emitting carbon, to be known as the Shadow Price of Carbon (SPC). The Government has announced that it will incorporate the Shadow Price of Carbon, not just in its appraisals of all new carbon reduction policies, but in its cost-benefit analysis of all new policies and

41 Department of Trade and Industry (DTI), Energy White Paper, Cm 576, February 2003, paragraph 6.63

42 Environmental Audit Committee, Sixth Report of Session 2005–06, *Keeping the Lights On: Nuclear, Renewables and Climate Change*, HC 584-I, para 53

43 Environmental Audit Committee, Ninth Report of Session 2006–07, *The structure of Government and the challenge of climate change*, HC 740, Q160

proposed construction projects. This announcement gained some very favourable coverage in the media, with one newspaper reporting it on its front page as: “Ministers ordered to assess climate cost of all decisions—Government says new ‘carbon price’ will favour eco-friendly policy choices”.⁴⁴

31. The reality is far more complex, and not necessarily a step forward in terms of driving Government policy towards lower emissions. To begin with, simply putting a price on carbon emissions will not necessarily alter the economics of various policy decisions; it all depends on what level the price is set at. Second, there are intrinsic difficulties in assigning a single price to carbon, which means that simply plugging such a figure into a spreadsheet of costs and benefits, to work out whether a policy represents value for money and should therefore go ahead, may in many cases be inadequate to reflect its implications for the UK’s overall climate change goals. The overall risk is that the incorporation of a Shadow Price of Carbon into all policy decisions may actually lead to *less* thought being given to implications for climate change strategy, while simultaneously giving a false sense of assurance that the opposite is the case.

32. The details of the SPC, revealed in a paper published by Defra,⁴⁵ give us some cause for concern. The paper explains that the SPC is based on a previously used concept, the Social Cost of Carbon, which aims to reflect the cost in monetary terms of the damages arising in the future from each tonne of carbon emitted today. We have in previous reports subjected the Social Cost of Carbon to a great deal of criticism. Major criticisms we have heard from witnesses include the following:

- **It is impossible to put a monetary cost on the effects of climate change:** “many impacts are too uncertain (will the Greenland ice shelf melt? How fast?), unmonetised (what are the financial impacts of millions of environmental refugees?) or unmonetisable (what is the value of a coral reef, or the Amazon rainforest?)” (Friends of the Earth);⁴⁶
- **It is impossible to know what level of climate change will occur in the future:** “you can only calculate the social cost of carbon once you have determined the carbon trajectory that you are on, because the cost of a tonne of carbon emitted today [...] depends on how much carbon is emitted in the future. [...] As we know, the trajectory of climate change is one of the most uncertain things in the lexicon, quite apart from what the effects of any given trajectory of climate change are likely to be” (Professor Paul Ekins).⁴⁷

Indeed, in our 2007 inquiry into the Stern Review, Professor Ekins told us

You will know that Defra and the Treasury had a joint process and commissioned a couple of learned papers on the subject which are on Defra’s website and the

44 “Ministers ordered to assess climate cost of all decisions”, The Guardian, 22 December 2007

45 Defra, “The Social Cost of Carbon And The Shadow Price of Carbon: What They Are And How To Use Them In Economic Appraisal In The UK”, December 2007, www.defra.gov.uk

46 Ev 9

47 Environmental Audit Committee, Seventh Report of Session 2006–07, Beyond Stern: From the Climate Change Programme Review to the Draft Climate Change Bill, HC 460, Q226

Treasury's website. I was a peer reviewer of those papers so I was quite closely involved in it and I tried really to understand what was going on. Eventually I came to the conclusion that [...] all attempts to put a number, actually to arrive at a figure within which you could locate the social costs of carbon, were so fraught and uncertain as to be effectively useless as an instrument of policy.⁴⁸

33. Defra's paper on the Shadow Price of Carbon is completely silent on the first of the above points, that it is impossible accurately to reflect the damages of climate change in a monetary cost figure. We asked the Exchequer Secretary about this, who replied:

The Green Book⁴⁹ methodology is clear that all social costs and benefits should be taken into account with the proviso that they should be monetised wherever possible, and set out and explained clearly where they can not be quantified. Work continues on a number of issues concerned with appraising and pricing the effects of climate change.⁵⁰

This reply does not inspire confidence. The strict monetary value given for the SPC will undoubtedly be an undervaluation, given that it explicitly excludes social costs such as those arising from mass migrations and local wars due to increased flooding and droughts. Meanwhile, given that the entire rationale behind the new SPC is that it is meant to incorporate the costs of climate change on a simple and universal basis, we have some doubts that separately explaining the potential range of non-monetised costs will in practice carry any weight in the cost-benefit analysis process.

34. Even more worrying is the Defra paper's approach to the other of the criticisms of the SCC we have highlighted above, that in order to calculate the costs of climate change you have to know in advance how much carbon will be emitted in the future, and thus what level of climate change we might expect the world to experience. The Defra paper deals with this problem by assuming that greenhouse gas concentrations will be stabilised at 550ppm CO₂e (parts per million of carbon dioxide-equivalent). Its rationale is as follows:

The Stern Review suggests that the optimum stabilisation goal requires the world to aim for atmospheric concentration somewhere in the range 450–550ppm CO₂e to conclude that it is worth acting, each country needs to be confident that enough other countries are committed to a similar goal. Commitments under Kyoto and emerging post-Kyoto consensus on emissions caps in the EU, combined with emerging climate change policies in other countries abroad, mean it is now much more likely that the world will do something significant about global warming than that it will do nothing. Whether this is consistent with the stabilisation goal

48 Environmental Audit Committee, *Beyond Stern: From the Climate Change Programme Review to the Draft Climate Change Bill*, Q227

49 The Green Book is a Treasury publication which provides guidance to public sector bodies on the economic assessment of spending and investment, including the preparation of business cases for specific projects. The Treasury explains: "The Green Book methodology should be used to make an economic assessment of the social costs and benefits of all new policies projects and programmes including the economic assessment of regulations under regulatory impact analysis. As recommended by the Green Book all spending proposals should be accompanied by a proportionate and well structured business case." HM Treasury, "Green Book", www.hm-treasury.gov.uk

advocated by Stern is not yet clear, but for the purposes of decision making in the UK this is the most reasonable assumption to make.⁵¹

35. As a result of this, the level at which the Shadow Price of Carbon is set is considerably lower than the level which Stern set for a 'business as usual' trajectory of emissions. In other words, by assuming that action will be taken to ensure that the effects of climate change will be relatively mild, the paper concludes that the costs of climate change are relatively low. In doing this, however, it is setting a relatively low carbon price to be plugged into all Government decision-making today. The risk is that this will fail to discourage the approval of policies and projects that will lead to a growth in carbon emissions—and thus help to make it more difficult to achieve the stabilisation target that the paper assumes will be met. Friends of the Earth commented on this:

I could give you what I find a shocking example, from the Heathrow consultation that came out recently on this. [...] In Heathrow they tot up that sum, the shadow cost of carbon, against all the other costs and benefits, and that sum is a net economic benefit to the economy so Heathrow gets green-lighted using this lower cost of carbon. Effectively, Heathrow is getting the go-ahead—which will massively increase carbon emissions: 180 million tonnes of carbon in total—because they have used a lower [price] of carbon. [...] They are using this lower figure, which has the effect of making carbon emissions go up, which means that they do not meet the targets that they are assuming are being met through the use of the shadow price. [...] It is almost Orwellian in the way it uses carbon price to come up with a policy result. It is just shocking.⁵²

36. We asked the Exchequer Secretary about the circularity in the way in which the Government had calculated a relatively low level for the Shadow Price of Carbon. In response, she argued:

- i. that the Government was concerned that by setting the SPC at a higher level, the costs of implementing carbon reduction policies would begin to outweigh the future costs of the climate change they were designed to mitigate;
- ii. the Government is conducting further research on what the costs of climate change are projected to be, with the implication being that it would revise the SPC accordingly in the light of new projections; and
- iii. the Government will assess the case for changing the basis of the SPC, so that it is reformed to reflect the global carbon price deemed requisite to drive carbon reductions in line with global targets.⁵³

37. We do not feel these points address our concerns. Most importantly, none of these points addresses the issue we raised about the fatal circularity in the Shadow Price of Carbon, that by assuming a relatively low level of climate change and setting a relatively

51 Defra, "The Social Cost of Carbon And The Shadow Price of Carbon: What They Are And How To Use Them In Economic Appraisal In The UK", p 4

52 Q36

53 Ev 68–9

low carbon price as a result, the SPC may fail to deter the approval of high-carbon developments. The first point, that had the SPC been set at a higher level it might lead to such an aggressive programme of emissions cuts in the UK that this would outweigh the future costs of climate change, betrays a short-termist view that fails properly to comprehend the risks of failing to act in time. As for the third point, that the Government will review the level at which the SPC is set at, the question remains whether a single price figure will be enough to drive the varied planning and investment decisions in different sectors of the economy required to radically reduce UK emissions. We agree with the comments of Simon Bullock of Friends of the Earth, who argued that a better way of ensuring the right decisions were taken at the right time would be for the Government:

[...] to set a strategy across the entire economy and across all sectors for delivering the carbon budgets within the Bill. It is a simpler business, although still complicated, rather than to use carbon social cost price—basically the damage cost—to say: “What is the most cost-effective way of meeting this budget?” so for all sectors of the economy we are going to meet it in this way. This sector will meet this much, this sector will meet this amount, and in each sector we do the most cost-effective policies and you look across sectors to determine which sectors do most. That is a better way of doing it. I think it is one that can be done with far less confusion than exists at the moment.⁵⁴

38. There appear to be serious flaws in the thinking behind the new Shadow Price of Carbon. We recommend that it be reformed, so that instead of assuming that global climate change goals will be met, it is based on the costs of climate change on a ‘business as usual’ trajectory of emissions. Furthermore, given the inherent difficulties in putting a price on climate change, the Government’s first priority in deciding on the merits of potential policies and construction projects ought to be deciding how they affect UK carbon budgets, and only secondly on what the monetary value of resulting carbon emissions would be. We may choose to examine the Shadow Price of Carbon in more detail in a future inquiry, looking in particular at how it is being used in cost-benefit analyses and impact assessments throughout government.

Environmental Transformation Fund

39. One of the four headline environmental announcements in the PBR was the creation of “an Environmental Transformation Fund of £1.2 billion over the CSR07 [2008–11] period”.⁵⁵ The Environmental Transformation Fund (ETF) was originally announced by the then Secretary of State for Environment, Food and Rural Affairs in June 2006. At the time he outlined the purpose of the ETF as follows:

We believe there is a major opportunity for the UK not just to invest in renewable energy, other non nuclear low carbon technologies and energy efficiency, but also to

54 Qq 38–9

55 HM Treasury, 2007 Pre-Budget Report and Comprehensive Spending Review: Meeting the aspirations of the British people, p 113

build successful businesses in these fields. The new Environmental Transformation Fund will grasp this opportunity.⁵⁶

The 2007 PBR clarified that the ETF would be split between a domestic fund for low carbon technology in the UK, and an international fund (the ‘ETF-International Window’) for forestry protection and low carbon investments in the developing world. Over three years, £370m will be spent on domestic projects, with £800m being spent on projects in developing countries.

Environmental Transformation Fund: the domestic element

40. The PBR explains that the domestic ETF will be jointly administered by Defra and BERR, with Defra contributing £170 million and BERR £200 million. A further breakdown of these figures reveals that Defra’s contribution “consists of £41m of existing commitments, together with an uplift of £129m over the three years of the CSR period”, while BERR’s funding “consists of £126m expected spend on existing commitments together with an uplift of £41m over the CSR period.”⁵⁷ In other words, of the £370m over three years, only £170m is new money.

41. This is a relatively modest amount, especially considering that the Stern Review had recommended a doubling of public R&D funding for the energy sector alone.⁵⁸ It is all the more disappointing given that when the then Environment Secretary made the initial announcement of the ETF, he simultaneously announced the proportion of carbon allowances that would be auctioned in Phase II (2008–12) of the EU Emissions Trading Scheme. This prompted many people to assume that the ETF would be at least part-funded by the proceeds of the auction. When we took evidence from the then Environment Minister in December 2006, he certainly indicated that it was being strongly considered: “If the proceeds are recycled towards the Environmental Transformation Fund that is being considered, then we would greatly welcome auctioning, and progressively higher auctioning, carefully managed, could generate significant investment income.”⁵⁹ In the same inquiry, we heard that, at a price range between 15 and 30 euros a tonne, the planned auctioning of 7% of the UK’s allocated EU ETS allowances in Phase II should generate between £179m and £372m per year.⁶⁰ This contrasts unfavourably with the announced funding for the domestic ETF of £370m over three years, of which £200m is from existing funds.

42. Another concern we have over the details announced for the domestic ETF is that it risks being spread very thinly. BERR has outlined that it will be spent on the following:

- Hydrogen Fuel Cell and Carbon Abatement Demonstration Programme;

56 HC Deb, 29 June 2006, col 397

57 “Environmental Transformation Fund”, BERR, www.berr.gov.uk/energy/sources/sustainable/etf/page41652.html

58 HM Treasury, Stern Review on the Economics of Climate Change, p 347

59 Environmental Audit Committee, Second Report of Session 2006–07, EU Emissions Trading Scheme: Lessons for the future, HC 70, Q131

60 Environmental Audit Committee, *EU Emissions Trading Scheme: Lessons for the future*, Q65. Exchange rate as of 29 November 2007, 1 euro = £0.7147, <http://markets.ft.com/ft/markets/overview.asp>

- Marine Renewables Deployment Fund;
- Low Carbon Buildings Programmes;
- Bioenergy Capital Grants Programme;
- Offshore Wind Capital Grants programme;
- Near Zero Emissions from Coal project;
- Carbon Trust’s innovation programme, including research accelerators, technology accelerators, and incubators;
- Carbon Trust funding for new low carbon enterprises, including Partnership for Renewables;
- Carbon Trust investments in low carbon technology businesses;
- Carbon Trust energy efficiency loans scheme for small and medium sized enterprises; and
- Salix Finance public sector revolving loan schemes.

What is more, the BERR website states that this list may soon be added to: “Announcements will be made on any further activities under these programmes and any new schemes from April 2008 onwards.”⁶¹

43. We put it to the Exchequer Secretary that this scale of investment was simply inadequate. She responded that “It is a significant start”, and that there were additional funding streams available for low carbon R&D.⁶² **We believe that the £170m new money over three years, announced in the PBR for low carbon investments in the UK, would have been a significant start several years ago. But the urgency of the need to cut emissions means that this should now be a much higher spending priority. In particular, we are disappointed that this sum appears to be considerably smaller than the amount of revenue the Government is projected to earn from auctioning carbon allowances under the EU Emissions Trading Scheme. We are also concerned that the domestic Environmental Transformation Fund is being spread too thin, and that a considerable proportion of the funding (for instance, the energy efficiency loans distributed by the Carbon Trust and Salix Finance), while welcome, is not aimed at developing step-changes in new technology, which ought to be the focus of the Fund. We recommend that the Treasury revisit the settlement for the domestic ETF as soon as possible, especially once revenues from EU ETS auctions are more certain.**

Environmental Transformation Fund—International Window

44. The PBR explained that the Environmental Transformation Fund—International Window (ETF-IW) “will support development and poverty reduction through

61 “Environmental Transformation Fund”, BERR, www.berr.gov.uk/energy/sources/sustainable/etf/page41652.html

62 Q164

environmental protection and help developing countries to tackle environmental challenges. [... It] will work to support adaptation to climate change, provide access to clean energy, and help tackle unsustainable deforestation.”⁶³ The Comprehensive Spending Review confirmed that it will be funded 50:50 by Defra and the Department for International Development (DfID), each contributing £400m over three years, all of which is new money. (Although £50m was already committed, at Budget 2007, to fund the Congo Forest Conservation Initiative.)⁶⁴ The ETF-IW will take the form of capital grants to a fund managed by the World Bank, which will distribute funds to recipients in the form of loans.

45. We welcome the announcement of £800m new money over three years for environmental investments in the developing world. This was probably the most significant and impressive announcement in the PBR. Certainly—while raising several issues, some addressed below—WWF told us they were very impressed with the scale of this funding:

[...] £800 million is a very substantial amount. This is the first time that a government has put forward so much money. [...] It could make a massive impact [...] This fund is really to be welcomed and could make a potential impact on global carbon emissions.⁶⁵

46. At the same time, we have a number of concerns as to the design of this fund. First, its focus appears to be rather confused, given that the three different types of project it is intended to fund—low carbon energy investments, forestry protection, and adaptation to climate change—are each quite different. This combines with the concerns expressed to us by WWF over the management of the fund by the World Bank, and the way in which funding is to be distributed in the form of loans, with the expectation being that recipients will earn a profit and thus repay what they have borrowed. While this might be appropriate for energy investments, it is far from clear that this is appropriate for funding forestry conservation or adaptation projects. In particular, we are concerned that the emphasis on awarding loans to profit-driven projects will lead to funding being awarded to biofuels plantations, about which we have recently expressed serious reservations.⁶⁶ For instance, WWF told us:

[...] the World Bank is including in its definition of clean energy large hydropower dams which do not abide to the World Commission on dams, or biofuels without any sustainability criteria. We are concerned that the ETF might contribute to such technologies which have negative social [and] environmental impacts.⁶⁷

63 HM Treasury, 2007 Pre-Budget Report and Comprehensive Spending Review: Meeting the aspirations of the British people, para 7.78

64 The Government explains: “The new fund initiative will support proposals made by ten central African countries to protect the Congo Basin rainforest – the second largest in the world and roughly twice the size of France – from destruction. The main threats are due to logging, mining and clearance for agriculture.” “Budget 2007: Benn announces £50 million UK contribution to new Congo Basin rainforest conservation fund”, DfID press release, 21 March 2007

65 Q66

66 Environmental Audit Committee, First Report of Session 2007–08, Are Biofuels Sustainable?, HC 76-I

67 Q51

While the Exchequer Secretary responded to this concern—telling us the Government did not expect to give over total control of the fund to the World Bank, and saying it would be “patently absurd” if support for biofuels meant “we got rid of all the forests”⁶⁸—her statement stopped far short of the comprehensive assurance we were looking for. **The Government should work with the World Bank to ensure appropriate governance standards are in place for the international ETF to deliver a suitable disbursement mechanism that places rigorous sustainability criteria at the heart of what the fund delivers. Furthermore, the Government should look again at whether this fund should be dedicated solely to low carbon energy investments, with forestry protection and climate change adaptation being funded by separate instruments, less focused on profit-making opportunities.**

Defra’s budget settlement

47. First among the four major environmental announcements in the Pre-Budget Report was the budget settlement given to Defra in the Comprehensive Spending Review:

[...] increasing the Department for Environment, Food and Rural Affairs’ budget by an average of 1.4 per cent a year in real terms, from £3,508 million in 2007–08 to £3,960 million in 2010–11. This includes increasing funding for flood and coastal erosion risk management from £600 million in 2007–08 to £800 million in 2010–11⁶⁹

Despite this increase in funding there has recently been much parliamentary concern over reported budget cuts within Defra. The Environment, Food and Rural Affairs (EFRA) Select Committee, which has responsibility for scrutinising Defra’s budget, is currently inquiring into the funding of Defra. In our inquiry we received evidence, from Green Alliance and Friends of the Earth, to suggest that the Treasury was under-funding Defra, considering the importance of increased spending on climate change (both in terms of mitigation and adaptation). The projected impacts of climate change include increased risks of flooding and outbreaks of insect-borne diseases, such as bluetongue.⁷⁰ It is likely therefore that climate change will increase the incidences of environmental crises that draw on the resources of Defra and its agencies. It would be unfortunate if in responding to unforeseen natural crises, potentially exacerbated by climate change, the Government undermined its ability to fund its overall climate change programme. We have some concerns about whether the Treasury is prepared to ensure that climate change programmes are sufficiently funded. We have written to the Chairman of the EFRA Committee, drawing his attention to our concerns.

68 Q170

69 HM Treasury, *2007 Pre-Budget Report and Comprehensive Spending Review: Meeting the aspirations of the British people*, p 113

70 Purse et al, “Opinion: Climate change and the recent emergence of bluetongue in Europe”, *Nature Reviews Microbiology*, vol 3 (February 2005), pp 171–181

Emissions trading

48. Carbon credits (sometimes referred to as emissions allowances) are designed to be used within emissions trading systems, the most significant being the EU Emissions Trading Scheme (EU ETS). Each credit is meant to be equivalent to one tonne of carbon dioxide; within trading schemes, where a project (for example, the replacement of diesel generators with solar panels in rural India) is judged to have reduced carbon emissions, it may sell credits equal to this saving to another agent (for instance, a coal-fired power station in the UK) in order for it to be recognised as having in effect reduced its emissions to a lower target level.

49. In October 2007 we published a short report on the transparency with which the Government was reporting the use of carbon credits. In particular, we singled out a graph in the 2007 Budget Report which incorporated the net purchase of millions of carbon credits in its depiction of UK CO₂ emissions for 2005, without making this clear. The graph therefore depicted UK CO₂ as going down steeply in 2005, when in fact actual carbon emissions from within the UK were virtually unchanged since 2004. A small footnote stated that the graph took the effects of the EU ETS into account, but did not explain any further what this meant. Following a letter we had written to the Secretary of State for Environment in the summer, in which we first raised some of these issues and singled out the same Budget 2007 graph, the 2007 Pre-Budget Report published a similar graph which was much more transparent, separately depicting ‘actual UK emissions’ and ‘UK emissions incorporating trading’.

50. Transparency could still be improved in many ways, however. We are still aware of important examples where the distinction between emissions cuts made at home and those funded abroad is not being made explicit. As a notable example, **in his Pre-Budget address on 9 October 2007, the Chancellor told the House that, “We are the only country to have met our Kyoto obligations. We have reduced our greenhouse gas emissions by almost a fifth since 1990”,⁷¹ without making it clear that this incorporated the net purchase by the UK of some 33.8 million carbon allowances in 2006.** Taking the actual emissions figures for 2006 from the UK itself, greenhouse gas emissions were down 15.1% since 1990—not 19.5%, the figure, incorporating emissions trading, that the Chancellor was alluding to.⁷² **We recommend that it is always made clear, in Government statements and documents, where UK reported emissions figures incorporate the purchase of carbon credits; the risk otherwise is that politicians and the public will receive a falsely reassuring picture of progress in decarbonising the UK itself.**

51. Aside from the simple issue of transparent reporting of the use of emissions trading, we also have some concerns about the value of certain credits: essentially, whether they do all in reality represent a cut in emissions, somewhere in the world, equivalent to one tonne of CO₂. For example, it is widely agreed that in Phase I (2005–07) of the EU ETS, Member States allocated their industries more carbon allowances than they needed, the result being

71 HC Deb, 9 October 2007, col 171

72 Defra, UK Climate Change Programme - Annual Report to Parliament, July 2007, p 14, p 15. To clarify these were the provisional figures for 2006, used at the time of the Pre-Budget Report, and have since been updated: see “UK climate change sustainable development indicator”, Defra statistical press release 25/08, 31 January 2008

that many industries had spare allowances to sell without having had to do anything to reduce their emissions. This is even recognised by the Treasury; for instance, in a document published alongside the PBR, the Treasury stated: “While Phase I has had a number of problems as a result of over-allocation of allowances in the EU as a whole, it has provided valuable learning opportunities for emitters, regulators, traders and governments.”⁷³ In such circumstances, purchasing carbon credits has been described as buying ‘hot air’, rather than funding genuine emissions reductions.

52. We asked the Exchequer Secretary what the Government was doing to verify that each carbon credit purchased by the UK, and set against national emissions figures, was genuinely reducing global emissions by one tonne of CO₂. She replied:

The point of a cap and trade system is that you cap and then trade. If you pay for allowances with money you have to make an assumption that that reduces emissions somewhere else where the system is working, and since the damaging effects of a tonne of carbon are the same if the emission is in Devon or Delhi I do not think it matters that much. We have to be confident in order to incentivise emissions reductions. If we can identify the domestic and international nature of the reductions that is the transparency we need.⁷⁴

We are not satisfied by this answer. **The Government cannot afford simply to assume that purchasing carbon credits is leading to genuine emissions reductions elsewhere in the world. We recommend that the Government demonstrate a systematic approach to verifying, as rigorously as possible, that the net purchase of carbon credits by the UK is funding genuine emissions reductions. We further recommend that the new Committee on Climate Change evaluate each year the quality of the emissions credits set against the UK’s carbon budget for that year: we believe it should state whether, in its opinion, these credits have genuinely reduced global emissions by an equivalent amount.**

Public Service Agreements

53. Public Service Agreements (PSAs) were introduced in the 1998 Comprehensive Spending Review (CSR). Through PSAs the Treasury assigns Government Departments and Agencies various policy objectives, and sets delivery targets to measure performance in implementing them. The 2007 CSR replaced all existing Agreements with a set of 30 new PSAs. These included two with specific reference to the environment: PSA 27, “Lead the global effort to avoid dangerous climate change”, and PSA 28, “Secure a healthy natural environment for today and the future”. For each of these Agreements the Treasury has set out a number of individual areas in which progress will be tracked, to build up a picture of how well the overall objective is being delivered (**Box 1**).

73 HM Treasury, *Moving to a global low carbon economy: implementing the Stern Review*, October 2007, p 26

74 Q184

Box 1 Key measurement indicators for PSA 27 and PSA 28

PSA 27: Lead the global effort to avoid dangerous climate change	PSA 28: Secure a healthy natural environment for today and the future
<p>Indicator 1: Global CO₂ emissions to 2050</p> <p>Indicator 2: Proportion of areas with sustainable abstraction of water</p> <p>Indicator 3: Size of the global carbon market</p> <p>Indicator 4: Total UK greenhouse gas and CO₂ emissions There are long-term national targets attached to this indicator: to reduce UK carbon emissions from 1990 levels by 26–32% by 2020 and at least 60% by 2050.</p> <p>Indicator 5: Greenhouse gas and CO₂ intensity of the UK economy</p> <p>Indicator 6: Proportion of emissions reductions from new policies below the Shadow Price of Carbon</p>	<p>Indicator 1: Water quality as measured by parameters assessed by Environment Agency river water quality monitoring programmes.</p> <p>Indicator 2: Biodiversity as indicated by changes in wild breeding bird populations in England, as a proxy for the health of wider biodiversity.</p> <p>Indicator 3: Air quality—meeting the Air Quality Strategy objectives for eight air pollutants as illustrated by trends in measurements of two of the more important pollutants which affect public health: particles and nitrogen dioxide.</p> <p>Indicator 4: Marine health—clean, healthy, safe, productive and biologically diverse oceans and seas as indicated by proxy measurements of fish stocks, sea pollution and plankton status.</p> <p>Indicator 5: Land management—the contribution of agricultural land management to the natural environment as measured by the positive and negative impacts of farming.</p>

Source: HM Treasury, "2007 PBR CSR: Public service agreements", http://www.hm-treasury.gov.uk/pbr_csrlpsa/pbr_csr07_psaindex.cfm

54. PSA 27 replaced the previous PSA on climate change, shared by Defra, BERR, and the Department for Transport (DfT): "To reduce greenhouse gas emissions to 12.5% below 1990 levels in line with our Kyoto commitment and move towards a 20% reduction in carbon dioxide emissions below 1990 levels by 2010, through measures including energy efficiency and renewables."⁷⁵ We have some concerns about this. First, **in bringing the previous Public Service Agreement on climate change to an end, the Treasury did not publish an assessment of Departments' performance against it, along with any actions for improvement. This is despite the fact that the previous target to reduce UK CO₂ by 20% by 2010 looks set to be missed by a wide margin.** (UK CO₂ emissions were only down by 6.4% on 1990 levels in 2006, or 12.1% down if the purchase of 33 million carbon credits is treated as reducing UK emissions by a further 33 million tonnes;⁷⁶ latest projections are that they will be around 11% down on 1990 by 2010, or around 16% down if the projected purchase of around 30 million carbon credits is taken into account.)⁷⁷ **This suggests either that there is a weakness in the design and operation of the PSA system, or that the Treasury is less interested in driving progress on reducing carbon emissions than other objectives.**

75 HM Treasury, 2004 Spending Review, http://www.hm-treasury.gov.uk/media/7/9/sr04_psa_ch13.pdf

76 "UK climate change sustainable development indicator", Defra statistical press release 25/08, 31 January 2008

77 Defra, UK Climate Change Programme – Annual Report to Parliament, p 21. Progress against the Kyoto target is more encouraging, however, with greenhouse gas emissions in 2006 down by 15% (19.5% if counting the purchase of carbon credits), already in advance of the UK's Kyoto target for 2008–12.

55. A second concern is that **the new PSA on climate change is too diffuse, with no clear departmental targets for reducing emissions, and less emphasis overall on reducing emissions from the UK**—this, after all, is only one of six performance indicators. We have in the past criticised the previous climate change PSA for not assigning enough accountability to the individual Departments which shared it. In the case of the Department for Transport, for instance, this meant we viewed the PSA it shared with Defra and BERR as:

[...] failing as a mechanism that might shine a light on the Department's efforts and hold it to account. [...] DfT's 2006 Annual Report] solely gives the *collective* progress against the Kyoto target and 2010 domestic targets. 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.⁷⁸

We are concerned that this situation will be exacerbated with the new PSA. Although the Secretary of State for Environment, Food and Rural Affairs is given overall responsibility for delivering the Agreement, no Departments are given specific responsibility for delivering emissions reductions. **We recommend that, in consultation with the Committee on Climate Change, the Government considers setting emissions reduction targets for specific sectors of the economy, with relevant Departments being made accountable for achieving them.**

56. We also have some concerns that environmental issues appear to be 'ghettoised' within two PSAs, rather than being reflected throughout the range of objectives given to Departments. As a key example, transport has a PSA devoted to it—PSA 5, "Deliver reliable and efficient transport networks that support economic growth"—whose delivery agreement states:

This PSA is specifically focused on the contribution that transport makes to economic growth. Other priorities for the Government's transport policy—in particular in relation to the urgent need for action on climate change—are covered separately in other PSA outcomes to which transport is a significant contributor.⁷⁹

The problem is that, to pursue this example, the Department for Transport is far more likely to concentrate on the indicators underpinning the PSA for which it is the lead Department and clearly accountable. PSA 27 on climate change, meanwhile, merely gives DfT's responsibility as ensuring that "transport policies balance the increasing demand for travel against protecting the environment".⁸⁰ Friends of the Earth (FoE) commented on this: "we have seen from experience that 'balancing' these demands in, for example, the

78 Environmental Audit Committee, Ninth Report of Session 2005–06, Reducing Carbon Emissions from Transport, HC 981-I, para 32

79 HM Treasury, "PSA Delivery Agreement 5: Deliver reliable and efficient transport networks that support economic growth", October 2007, p 3

80 HM Treasury, "PSA Delivery Agreement 27: Lead the global effort to avoid dangerous climate change", p 13

Aviation White Paper sees a strategy which allows for a greater-than-doubling increase in carbon emissions.”⁸¹ The Woodland Trust, meanwhile, singled out PSA 7, “Improve the economic performance of all regions and reduce economic inequalities between regions”, for criticism: “five out of the seven indicators in PSA 7 [...] relate to economic development, and only one deals with addressing climate change. None of the measurements appear to protect either green infrastructure or biodiversity.”⁸² The Woodland Trust also complained that there was only one indicator of progress in protecting biodiversity in the whole of the new PSA system, and that this could not give an adequate picture of progress overall.⁸³

57. Most importantly, in terms of reflecting the outlook of the Treasury and its influence on Government as a whole, Friends of the Earth criticised the Treasury for failing to embed environmental policy in its core economic objectives, as set out in PSA 1: “Raise the productivity of the UK economy”. As FoE put it:

It is a continuing major omission that the Government’s strategy on productivity, set out in PSA1, focuses so narrowly on labour productivity. There are other aspects of productivity which can help the UK’s competitiveness, and also environmental goals—resource and energy productivity. While it may have been the case in decades past that resource inputs were a minor element of productivity, this situation has now changed. It is becoming increasingly important for all economies to make rapid improvements in the efficiency with which they use resources and energy. [...] This is a major opportunity missed, for UK businesses and the environment.⁸⁴

We agree with Friends of the Earth: focusing on resource productivity would help to ensure that Government policies designed to increase economic growth would be in accordance with the principles of sustainable development (and indeed with the UK Sustainable Development Strategy).

58. We recommend that, in preparing now for the next Spending Review, the Treasury work to develop PSAs that will mainstream environmental objectives throughout the entire range of departmental activity. Environmental objectives must not be confined simply to a couple of explicitly environmental PSAs. In particular, we recommend that, rather than focusing purely on labour productivity, work starts now on developing ways of incorporating targets for improving the efficiency with which natural resources are used in the UK economy.

81 Ev 10

82 Ev 77

83 Ev 77

84 Ev 11

Conclusion

59. The Pre-Budget Report and Comprehensive Spending Review were published a year after the Stern Review. Alongside them, the Treasury published a report on how it was implementing Stern, but Friends of the Earth described it as “mainly a rehash of their existing policies”,⁸⁵ and certainly we found little sign in the PBR and CSR that the Treasury was responding on the scale and with the urgency Stern recommended. This was very disappointing given the particular emphasis which Stern had placed on the need to make early cuts in carbon emissions, and the argument that these are disproportionately beneficial both to the environment and to the economy. It was also somewhat curious given the conclusions of the Commission on Environmental Markets and Economic Performance,⁸⁶ and the report by the CBI’s climate change taskforce, both published in November 2007. Both reports highlighted the economic opportunities of accelerated investment in low carbon industries, and suggested that business attitudes towards climate change policy have shifted considerably—perhaps further than the Treasury has realised. To Friends of the Earth, the Treasury was behind the times: “It feels to us almost as if the Government is refusing to push at an open door”.⁸⁷ Certainly, in giving evidence to us on PBR 2006, Green Alliance had commented on the Treasury’s attitude hitherto: the Treasury would “often block proposals on the environment from other parts of Whitehall”, one reason for which being its “perception that the business community would not support a more ambitious approach”.⁸⁸

60. In its defence, the Exchequer Secretary argued forcefully not only that the Treasury was aware of the change in the attitudes of business, but that:

The interesting thing is how the Treasury is now seized of this. I do not believe that that is necessarily the case yet in many other countries. The Treasury is very much engaged in doing the analytical work to try to bring about the change we need to make in the most cost-effective and economically efficient way. That will help to demonstrate that there is a practical and efficient road map to de-carbonising our economy and we hope to be able to keep with us the population which naturally aspires to improved living standards and greater opportunities. When visiting other countries I do not discern that their finance ministries are as yet quite as engaged in this process. [...] ⁸⁹

61. We are not in a position to judge the record of other finance ministries. But we have been publishing annual reports on the Treasury’s environmental policies for a decade now, and for a number of years until the Stern Review came out in late 2006, what we saw essentially were small announcements and dwindling momentum. Publication of the Stern Review was a momentous event; but we have yet to see whether it has had a profound

85 Q35

86 “Commission on Environmental Markets and Economic Performance”, Defra, <http://www.defra.gov.uk/environment/business/commission/index.htm>

87 Q31

88 Environmental Audit Committee, Pre-Budget 2006 and the Stern Review, Q82

89 Q151

effect on Treasury thinking. In any case, whether or not the Treasury is now intellectually seized by climate change, it needs to provide real action. This is not least because in the 12 months between the publication of the Stern Review and that of the PBR, the science on climate change continued to harden, with global emissions rising faster than projected. For instance, while the Stern Review drew on more recent work, it was partly based on the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), published in 2001; in 2007 the IPCC published its Fourth Assessment Report, which considerably strengthened the certainty with which it assessed the causes and projected the development of climate change.⁹⁰ Also, in October 2007 a study by the Global Carbon Project warned that rising emissions suggested “a carbon cycle that is generating stronger-than-expected climate forcing sooner than expected”. This was the result of the authors’ analysis of a recent acceleration in the rise in global CO₂ emissions: these have been rising at an average of 2.9% per year since 2000 as opposed to 0.7% per year in the 1990s.⁹¹ In this context, the Treasury’s lack of urgency stands out as even more remiss.

62. The next Pre-Budget Report will be published within a new policy landscape, following the scheduled passing of Bills on climate change, energy, and planning, as well as the EU carbon reduction and renewable energy targets for 2020. Pre-Budget Report 2008 must establish a coherent set of measures to help deliver the UK’s 2020 domestic and European targets on emissions and renewable energy, and show explicitly what their planned contribution to this delivery will be.

90 Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: Summary for Policy Makers*, November 2007, www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf

91 Canadell et al, “Contributions to accelerating atmospheric CO₂ growth from economic activity, carbon intensity, and efficiency of natural sinks”, *Proceedings of the National Academy of Sciences (PNAS)*, 25 October 2007, p 4

Conclusions and recommendations

Green taxes: overview

1. The Treasury's argument that new or higher green taxes are unnecessary, because the Government is doing enough to protect the environment through other policies, is hardly convincing given the Government's lack of progress in reducing UK carbon emissions over the last decade. Even if it were the case that policy across Government was successfully delivering its environmental objectives in full, it would still not be an excuse for the Treasury's inaction. There is always a case for looking at the scope to increase green taxation, since the Government is always in need of tax revenue, and since, as the Treasury accepts, it is better to tax 'bads' than 'goods'. Taxes on high-carbon activities such as driving and flying can be used to reduce their demand without destroying it, thus helping to achieve environmental objectives while still generating large and predictable tax streams—which could potentially be used to reduce other taxes. (Paragraph 8)
2. As for the Treasury's argument that the relative decline in green taxes is a sign of their success in deterring the activities on which they are levied, we would reply overall that it has rather more to do with the Treasury's own decisions to freeze most environmental taxes in most years from 2000 to 2006 inclusive. This is not the first year we have heard this argument from a Treasury minister; we are disappointed to hear it yet again, having repeatedly pointed out its obvious flaws. (Paragraph 9)
3. We understand the Treasury's caution over hypothecating revenues from taxes to specific ends. However, it seems clear that an element of hypothecation could play a crucial role in gaining public acceptance of green taxes. It is perhaps unnecessary formally to ring-fence certain revenue streams for particular purposes, which could indeed reduce the flexibility the Treasury has to manage year-to-year public finances. What is more important is that the Treasury does a better job of publicly justifying green taxes by explaining their core environmental purpose, as well as linking them—however strictly—to increased spending on the environment and reductions in other taxes. We recommend that the Treasury consults on, publishes, and follows an explicit strategy to win public support for environmental taxation. (Paragraph 12)

Aviation

4. In December 2006 the Treasury announced a doubling of all APD rates from February 2007, which in some parts of the media was reported as a bold move for the environment. In reality for the majority of flights it only restored the rate of aviation tax the Government inherited when it came into office. This represents a cut in real terms of 29%. (Paragraph 13)
5. We welcome the Treasury's announcement to reform Air Passenger Duty into a levy per flight rather than per passenger. We further welcome the Treasury's announcement of consultation on how this reform should be implemented, and how aviation tax might be better correlated to distance travelled. We recommend that airlines be mandated to calculate each passenger's share of the reformed 'per-flight'

tax, and to make this figure highly visible (on adverts, websites, and tickets). We also recommend that the Treasury closely examine the merits and practicalities of better reflecting the emissions arising from longer intercontinental journeys by adding a third banding to Air Passenger Duty, to cover ‘very long-haul’ flights. Short-haul charges must reflect the disproportionate emissions resulting from take off and landing, and should be aimed to encourage ‘modal shift’ towards rail alternatives. Above all, it is vital that all rates of aviation tax are significantly increased, so as to stabilise demand and resulting emissions. (Paragraph 15)

6. In view of their potential size, we recommend that the Treasury publish an estimate of the costs to the Exchequer of reimbursing VAT expenses to aviation companies. This would be in the public interest, no matter the practical obstacles to changing aviation’s VAT status, and might galvanise interest in how these obstacles might be overcome. (Paragraph 17)

Motoring

7. We note that some motoring organisations have begun calling for the next planned increase in fuel duty to be scrapped, given the rise in petrol prices due to increases in the price of crude oil. We also note, however, that demand for road fuel is still strong in spite of these price rises. The forthcoming Budget is a test of the Treasury’s environmental credibility: it must not defer its planned rises in fuel duty. (Paragraph 19)

Carbon Capture and Storage

8. If the Government were only going to fund one Carbon Capture and Storage demonstration project, we believe it was right to restrict the scope of the competition to a post-combustion coal plant. We agree with the Government that this type of technology has the greatest global potential, given the possibility that it could be retrofitted to existing power plants. If widely adopted, it could dramatically reduce the emissions of countries such as China and India, while simultaneously providing significant economic opportunities to firms with experience of carrying it out. (Paragraph 22)
9. Post-combustion technology appears to be further away than pre-combustion from being introduced by the market on its own. This means that funding a full-scale demonstration plant is a particularly appropriate and effective form of subsidy for post-combustion technology. We hope that this demonstration will be able to prove to interested companies that post-combustion plants are physically viable, and teach valuable lessons about how to build and operate them efficiently. (Paragraph 23)
10. While the CCS competition is very welcome, it is imperative that the Treasury provide considerably more assistance for CCS projects overall. No matter which type of technology is adopted, CCS plants will incur extra build, operational, and infrastructure costs over conventional power stations. Without clear and long-term financial security for CCS, the risk is power companies will not invest in CCS plants even once the demonstration project is operational—let alone bring forward the plans they have for pre-combustion plants today. In the longer term the EU ETS may

be able to provide sufficient financial incentives. But in order for CCS to be deployed widely and swiftly in the UK, we recommend that the Government introduce some form of financial mechanism for incentivising CCS power plants over conventional power stations. The Treasury should examine options such as a feed-in tariff for CCS plants, or contracts which guarantee funding for the difference in costs between CCS and conventional plants. (Paragraph 28)

11. Overall, we are concerned that the Government is not showing sufficient urgency in its assistance to Carbon Capture and Storage industries. The Government must now be more decisive in its support for CCS, especially given that a number of existing power stations are coming to the end of their lives, and power companies are taking decisions imminently on a new generation of power plants to replace them. Where these can be built with pre-combustion CCS, they will immediately lower UK emissions. Where they are built as conventional gas and coal-fired power stations, the Government must mandate that they are built 'CCS-ready', with the expectation and the financial support in place to ensure they are retrofitted with post-combustion technology as soon as possible. (Paragraph 29)

Shadow Price of Carbon

12. There appear to be serious flaws in the thinking behind the new Shadow Price of Carbon. We recommend that it be reformed, so that instead of assuming that global climate change goals will be met, it is based on the costs of climate change on a 'business as usual' trajectory of emissions. Furthermore, given the inherent difficulties in putting a price on climate change, the Government's first priority in deciding on the merits of potential policies and construction projects ought to be deciding how they affect UK carbon budgets, and only secondly on what the monetary value of resulting carbon emissions would be. We may choose to examine the Shadow Price of Carbon in more detail in a future inquiry, looking in particular at how it is being used in cost-benefit analyses and impact assessments throughout government. (Paragraph 38)

Environmental Transformation Fund: domestic element

13. We believe that the £170m new money over three years, announced in the PBR for low carbon investments in the UK, *would* have been a significant start several years ago. But the urgency of the need to cut emissions means that this should now be a much higher spending priority. In particular, we are disappointed that this sum appears to be considerably smaller than the amount of revenue the Government is projected to earn from auctioning carbon allowances under the EU Emissions Trading Scheme. We are also concerned that the domestic Environmental Transformation Fund is being spread too thin, and that a considerable proportion of the funding, while welcome, is not aimed at developing step-changes in new technology, which ought to be the focus of the Fund. We recommend that the Treasury revisit the settlement for the domestic ETF as soon as possible, especially once revenues from EU ETS auctions are more certain. (Paragraph 43)

Environmental Transformation Fund: international element

14. We welcome the announcement of £800m new money over three years for environmental investments in the developing world. This was probably the most significant and impressive announcement in the PBR. (Paragraph 45)
15. The Government should work with the World Bank to ensure appropriate governance standards are in place for the international ETF to deliver a suitable disbursement mechanism that places rigorous sustainability criteria at the heart of what the fund delivers. Furthermore, the Government should look again at whether this fund should be dedicated solely to low carbon energy investments, with forestry protection and climate change adaptation being funded by separate instruments, less focused on profit-making opportunities. (Paragraph 46)

Emissions trading

16. In his Pre-Budget address on 9 October 2007, the Chancellor told the House that, “We are the only country to have met our Kyoto obligations. We have reduced our greenhouse gas emissions by almost a fifth since 1990”, without making it clear that this incorporated the net purchase by the UK of some 33.8 million carbon allowances in 2006. We recommend that it is always made clear, in Government statements and documents, where UK reported emissions figures incorporate the purchase of carbon credits; the risk otherwise is that politicians and the public will receive a falsely reassuring picture of progress in decarbonising the UK itself. (Paragraph 50)
17. The Government cannot afford simply to assume that purchasing carbon credits is leading to genuine emissions reductions elsewhere in the world. We recommend that the Government demonstrate a systematic approach to verifying, as rigorously as possible, that the net purchase of carbon credits by the UK is funding genuine emissions reductions. We further recommend that the new Committee on Climate Change evaluate each year the quality of the emissions credits set against the UK’s carbon budget for that year: we believe it should state whether, in its opinion, these credits have genuinely reduced global emissions by an equivalent amount. (Paragraph 52)

Public Service Agreements

18. In bringing the previous Public Service Agreement on climate change to an end, the Treasury did not publish an assessment of Departments’ performance against it, along with any actions for improvement. This is despite the fact that the previous target to reduce UK CO₂ by 20% by 2010 looks set to be missed by a wide margin. This suggests either that there is a weakness in the design and operation of the PSA system, or that the Treasury is less interested in driving progress on reducing carbon emissions than other objectives. (Paragraph 54)
19. The new PSA on climate change is too diffuse, with no clear departmental targets for reducing emissions, and less emphasis overall on reducing emissions from the UK. We recommend that, in consultation with the Committee on Climate Change, the Government considers setting emissions reduction targets for specific sectors of the

economy, with relevant Departments being made accountable for achieving them. (Paragraph 55)

20. We recommend that, in preparing now for the next Spending Review, the Treasury work to develop PSAs that will mainstream environmental objectives throughout the entire range of departmental activity. Environmental objectives must not be confined simply to a couple of explicitly environmental PSAs. In particular, we recommend that, rather than focusing purely on labour productivity, work starts now on developing ways of incorporating targets for improving the efficiency with which natural resources are used in the UK economy. (Paragraph 58)

Conclusion

21. The next Pre-Budget Report will be published within a new policy landscape, following the scheduled passing of Bills on climate change, energy, and planning, as well as the EU carbon reduction and renewable energy targets for 2020. Pre-Budget Report 2008 must establish a coherent set of measures to help deliver the UK's 2020 domestic and European targets on emissions and renewable energy, and show explicitly what their planned contribution to this delivery will be. (Paragraph 62)

Formal Minutes

Tuesday 26 February 2008

Members present:

Mr Tim Yeo, in the Chair

Mr Martin Caton
Mr David Chaytor
Mr Nick Hurd
Mark Lazarowicz

Mr Graham Stuart
Dr Desmond Turner
Joan Walley

The 2007 Pre-Budget Report and Comprehensive Spending Review: An environmental analysis

The Committee considered this matter.

Draft Report (*The 2007 Pre-Budget Report and Comprehensive Spending Review: An environmental analysis*), proposed by the Chairman, brought up and read.

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

Paragraphs 1 to 62 read and agreed to.

Summary agreed to.

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

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

Ordered, That embargoed copies of the Report be made available, in accordance with the provisions of Standing Order No. 134.

Written evidence was ordered to be reported to the House for printing with the Report.

Written evidence was ordered to be reported to the House for placing in the Library and Parliamentary Archives.

[Adjourned till Tuesday 4 March 2008 at 10.00am]

Witnesses

4 December 2007

Page

Mr Stephen Hale, Director and **Mr Russell Marsh**, Head of Policy, Green Alliance Ev1

Mr Simon Bullock, Economy Campaigner, Friends of the Earth, **Mr Pete Lockley**, Head of Transport Policy and **Ms Lies Craeynest**, International Development Policy Advisor, WWF UK Ev20

11 December 2007

Dr Jeff Chapman, Chief Executive, The Carbon Capture & Storage Association, **Mr Sarwjit Sambhi**, Director of Power and Renewables, Centrica Energy, **Mr Rupert Steele OBE**, Director of Regulation, ScottishPower Ltd Ev36

Mr Jeff Gazzard, and **Ms Cait Weston**, Policy and Communications Officer, Aviation Environment Federation Ev52

12 December 2007

Angela Eagle MP, Exchequer Secretary to the Treasury, **Ms Rebecca Lawrence**, Head of Energy, Environment and Agriculture Team, **Ms Lindsey Whyte**, Head of Environment and Transport Tax Team, H M Treasury Ev59

List of written evidence

1	Association of British Insurers	Ev75
2	Aviation Environment Federation	Ev44
3	Aviation Environmental Federation supplementary memorandum	Ev57
4	Centrica Energy	Ev30
5	E. ON UK	Ev79
6	Friends of the Earth (England & Wales)	Ev8
7	Friends of the Earth (England & Wales) supplementary memoranda	Ev80
8	Scottish and Southern Energy plc	Ev75
9	Scottish Power Ltd	Ev34
10	Sea and Water	Ev77
11	The Carbon Capture and Storage Association	Ev28
12	The Woodland Trust	Ev71
13	WWF UK	Ev13
14	WWF UK supplementary memoranda	Ev27
15	Letter from the Chairman of the Committee to Angela Eagle MP	Ev67
16	Letter from Angela Eagle MP to the Chairman of the Committee	Ev68

List of unprinted evidence

The following memoranda have been reported to the House, but to save printing costs they have not been printed and copies have been placed in the House of Commons Library, where they may be inspected by Members. Other copies are in the Parliamentary Archives, and are available to the public for inspection. Requests for inspection should be addressed to The Parliamentary Archives, Houses of Parliament, London SW1A 0PW (tel. 020 7219 3074). Opening hours are from 9.30 am to 5.00 pm on Mondays to Fridays.

DEG final statement (note from WWF UK)

Orchard Partners London Ltd

List of Reports from the Committee during the current Parliament

The reference number of the Government's response to each Report is printed in brackets after the HC printing number.

Session 2007–08

First Are biofuels sustainable? HC 76

Session 2006–07

First The UN Millennium Ecosystem Assessment, HC 77, *(HC 848)*
 Second The EU Emissions Trading Scheme: Lessons for the Future, HC 70 *(1072)*
 Third Regulatory Impact Assessments and Policy Appraisal, HC 353 *(HC 849)*
 Fourth Pre-Budget 2006 and the Stern Review, HC 227 *(HC 739)*
 Fifth Trade, Development and Environment: The Role of FCO, HC 289 *(HC 1046)*
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