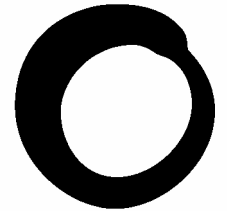


November 2006



**Friends of  
the Earth**

# Briefing

# After Stern: Towards a Climate Change Budget

Pre-Budget Report 2006

---

**Friends of the Earth inspires solutions to environmental problems, which make life better for people.**

**Friends of the Earth is:**

- the UK's most influential national environmental campaigning organisation**
- the most extensive environmental network in the world, with almost one million supporters across five continents and over 60 national organisations worldwide**
- a unique network of campaigning local groups, working in over 200 communities throughout England, Wales and Northern Ireland**
- dependent on individuals for over 90 per cent of its income.**

**To join or make a donation call us on 0800 581 051**

**Friends of the Earth, 26-28 Underwood Street, London N1 7JQ**

**Tel: 020 7490 1555 Fax: 020 7490 0881 Email: [info@foe.co.uk](mailto:info@foe.co.uk) Website: [www.foe.co.uk](http://www.foe.co.uk)**

Friends of the Earth Limited company number 1012357

♻️ Printed on paper made from 100 per cent post-consumer waste

## Introduction

The Treasury's Stern Report calls for urgent action on climate change, to protect the economy and environment. This will require new, visionary and decisive leadership to turn the UK economy into the flourishing low-carbon economy required in the next decade and beyond. If the Chancellor is to rise to this challenge and provide that leadership he is going to need to change his current approach.

Not a Pre-Budget or Budget speech has gone by since 1997 without the Chancellor mentioning the importance of the environment and of tackling climate change. But it is the doing part rather than the talking part of climate leadership that has found the Chancellor wanting. Emissions of carbon dioxide are now the highest they have been since Labour came to power in 1997. At that time the new Labour Government set itself a 13 year target to reduce carbon dioxide emissions by 20 per cent by 2010 from 1990 levels – at present they are only 5 per cent below 1990 levels<sup>i</sup>.

Despite committing himself in 1997 to increasing tax on polluting activities the Chancellor has presided over a reduction of environmental taxation since coming to office<sup>ii</sup>. Real revenues peaked in 2000 at almost £37 billion. Receipts from environmental taxes have fallen from 9.4% of total taxes in 1997 to 7.7% in 2005<sup>iii</sup>. According to the Institute for Fiscal Studies: "green taxes are at their lowest level for a decade."<sup>iv</sup>

This is mostly due to abandonment of the fuel tax escalator in 2000. A decision which has effectively handed £4bn to motorists compared with if the policy had continued<sup>v</sup>. An increase on taxes on polluting activities such as motoring and aviation is long overdue.

The Chancellor should be congratulated for taking some positive steps in his time - the Climate Change Levy, Aggregates Levy, Landfill Tax increases, emissions based Vehicle Excise Duty, Enhanced Capital Allowances for energy saving equipment and micro-generation, and reduction in VAT for many installed energy saving measures.

However when good policies have been introduced, the Chancellor and the Government consistently back down in the face of pressure from special interest groups - scrapping the road fuel duty escalator, freezing the climate change levy and agreeing to extremely weak emissions trading caps. Climate measures in recent Budgets have been modest pieces of micromanagement, increasingly at odds with the rhetoric of the Government about the need for action.

After Stern this is no longer - if it ever was - excusable. The Stern Report made clear the urgent need for decisive action and strong measures from Governments to tackle the economic, social and environmental threats of climate change. International efforts are crucial but so is national policy. Grasping the economic opportunity of taking action on climate change is in large part the Chancellor's responsibility. It is

vital that he uses this Pre-Budget Report to show that he intends to tackle carbon emissions with national policies as well as longer-term international initiatives.

The Stern report makes absolutely clear that this is a job for Government intervention not for uncontrolled markets. This is a wake-up call for a Government that has championed deregulation and voluntary approaches. The Stern Report makes clear that intervention will need to make appropriate use of all policy options, tax, trading, regulation and subsidy – rather than relying heavily on one.

This intervention must create incentives for households, businesses and the public sector and reward them when they take them. Taxing pollution has an important role but so does investment in infrastructure that enables people to cut emissions (such as decent affordable public transport) and incentives that reward people, firms, schools, hospitals for taking action. Rather than simply increase tax rates the Chancellor should be setting out a new deal for UK households for a new low-carbon future providing them with incentives to cut emissions in their homes and travel.

The Climate Change Bill announced by the Government in the Queen's Speech is very welcome. It must contain annual targets for reducing carbon emissions if it is to provide an effective framework for action. To accompany these annual targets the Chancellor should deliver a Carbon Budget alongside the monetary one. All measures taken in the budget should be judged by their effect on the UK's carbon emissions as well as their impact on the public purse and the private tax bill. When the Chancellor sits down having 'commended his budget to the house' he should do so after telling the nation what the overall impact will be on carbon emissions from the measures it contains.

Setting and delivering a carbon budgets, with well designed packages of policies, will be good for the economy – as the Stern report argues.

Well designed packages of green taxes, tax breaks and spending can cut polluting activity, reward good environmental behaviour, benefit the economy by creating demand for environmental goods and services, meet social objectives and improve our quality of life.

Countries that have invested in renewable energy have reaped the economic benefits. The German solar industry has increased turnover ten-fold in the last six years, is worth 3.7 billion euros annually and employs 42,500 people in production, distribution and installation. Denmark employs 29,000 in the renewable energy sector. The grants currently available in the UK for to install small scale domestic renewable energy generation run to just 58p per household.

Tackling climate change can also save businesses money. Small and medium-sized firms could cut over £1 billion off their energy bills every year through energy efficiency measures. According to The Carbon Trust UK businesses could have saved £570 million last summer by taking simple cost-effective efficiency measures. The Government has found that "*No- and low-cost measures can result in a 20 per*

*cent reduction in energy use and can have the same effect on profitability as a five per cent increase in sales.”*

Action on climate change can also help deliver the Government’s social objectives. At a national level, there are currently 2 million people in the UK who can’t afford to heat their homes. Yet over 1 millions homes don’t even have their hot water tank insulated, 6 million homes don’t have proper loft insulation and 9 million homes need Cavity Wall Insulation. These measures alone would save the UK 3.5 million tons of carbon a year while combating fuel poverty.

Alongside a Climate Change Bill to set annual targets we need the policies to hit those targets. The Pre-Budget Report will be the first real opportunity to see in specific policy terms whether the Government is prepared to respond seriously to the urgent challenge set out by Nicholas Stern.

At this Pre-Budget Report the Chancellor has the opportunity to create a socially progressive package of tax rises on polluting activities to fund tax breaks and spending on environmentally beneficial activities. This will benefit the climate, meet social objectives, save businesses money and create jobs.

## Summary of measures the Chancellor should take:

Friends of the Earth proposes that the Chancellor raise taxation on the most polluting cars and aviation in order to invest in public transport, and help fund grants and tax breaks to make our homes energy-efficient and cheap to heat. This means:

### **Tax the pollution caused by transport:**

- Increase Vehicle Excise Duty to provide a real incentive to buy less polluting cars - £2000 for new gas guzzlers (Band G) with a zero rate for the least polluting cars (Bands A and B).
- Reintroduce the road fuel tax escalator, respending the revenue raised investing in providing decent transport alternatives to motoring
- Increasing the tax on aviation by raising Air Passenger Duty by £15 for internal EU flights and £25 for outside EU, raising £1.7 billion.

### **A £2.4 billion fund to help green our homes including:**

- Council Tax and Stamp Duty rebates for those making their homes more energy efficient.
- Grants and tax breaks for households installing microgeneration technologies and a fair payment for the electricity they generate.

- Cutting VAT on energy saving measures for DIY and cutting the VAT for refurbishing homes to high standards of environmental sustainability.

**Other measures:**

- Create a stronger incentive for recycling more of our waste, by increasing the Landfill Tax to £75 a tonne, with partial re-spending to promote recycling facilities for households.
- A windfall tax on oil company profits to be used to help build the UK's renewable energy industry and a companies tax credit of at least 50% of the cost of developing and installing off-shore renewable energy.

The rest of this briefing sets out further details for these proposals.

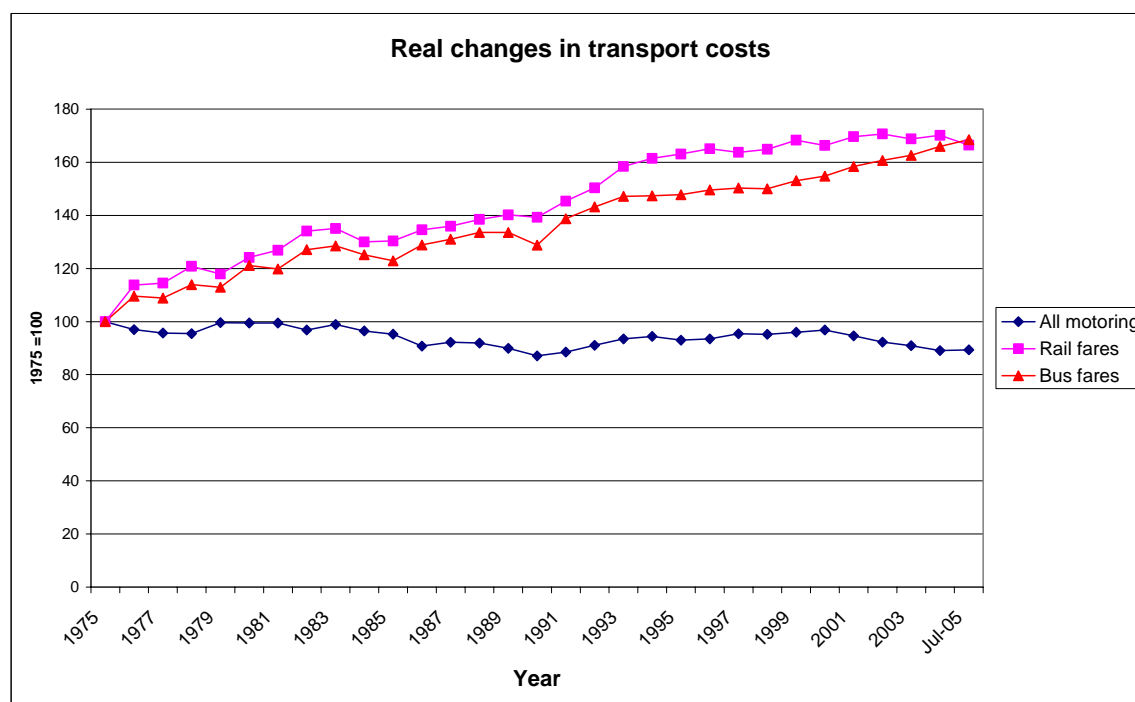
## Road transport

Road transport is responsible for around a fifth of the UK's carbon dioxide emissions. Emissions are rising – they are up 5% since 1997, and are predicted by the Government to continue to rise until 2020<sup>vi</sup> – this is against a Government target to cut overall carbon dioxide emissions by 20% by 2010, and 60% by 2050. The transport sector as a whole is at present the largest barrier to the Government meeting its overall climate targets.

There are two main reasons for road transport emissions continuing to rise.

First, the cost of motoring has fallen in recent years, while the cost of less polluting modes – rail and buses – have risen. (see graph 1). As a result, mileages have increased on the most polluting modes.

**Graph 1** Transport costs for motoring, rail and buses



Second, the average efficiency of cars has only improved very slowly. This is because the industry target for increasing new car efficiency is only voluntary, so there are no penalties for failure to comply. This is compounded by weak financial incentives to persuade buyers to choose a less polluting car.

For transport to reduce its carbon emissions, progress in both these areas is essential – and the key to them is Treasury action: to create the incentives for people

to switch to less polluting cars, and to change the relative attractiveness of different modes of transport. Urgent reform is needed in two areas:

- Vehicle Excise Duty: To help the switch to green cars
- Road Fuel Duty: To stop the fall in the costs of motoring, and provide funds for investment in public transport

## Vehicle Excise Duty

One of the biggest effects individuals have over their carbon emissions is what sort of car they buy. In each of the 4 main classes of cars (“superminis”, “lower medium”, “upper medium” and “4x4”) the best performing model has over 25% lower emissions than the average in the class.

The Government has 7 bands for car emissions (A-G), yet although engine efficiency has been improving over the years, in 2005, only 3% of new car sales were in the least polluting categories A and B, and 8% would have been captured in the Government’s newly created most polluting category G (over 225 g/km).

In total, the car industry is not making enough progress. It has an EU voluntary agreement to get to new car average emissions of 140 g/km by 2008 – we are three quarters of the way through the target period, only 40% of the necessary progress has been made, and the Society of Motor Manufacturers and Traders has conceded it will not be met.

The point of purchase has a major effect on future emissions, but there is currently little incentive for people to buy a more fuel efficient car. The Government has accepted that differentials have an impact on people’s purchasing choices. The move to create zero rate of VED for the cleanest cars is welcome, however, the differentials introduced in the March 2006 budget for the most polluting cars were too small to make a difference to people’s choices. As an example, the difference of £45 between band F and G is 0.1% of the cost of a Porsche Cayenne, or the cost of replacing one windscreen wiper.

The Department for Transport has published research showing that wider differentials would work – wider VED differentials would persuade people to buy a less polluting car. They say that: *“the current graduated scheme does not offer a large enough incentive to encourage behavioural change”*.

To provide better incentives for motorists to purchase less polluting cars, we advocate:

- Creation of a zero rate for Band B (the same as Band A)
- Major, immediate increases for new cars in the most polluting bands
- Minor increases for existing cars, with a clear commitment that existing cars will pay the same rate as new cars by 2010.

**Proposed VED rates for new petrol cars, registered after March 2007.**

£ per year VED band	CO <sub>2</sub> g/km	Current - 2006	2007
A	<100	0	0
B	101-120	40	0
C	121-150	100	100
D	151-165	125	300
E	166-185	150	700
F	186-225	190	1200
G	226+	210	2000

For existing cars, we advocate the same drop to zero for Band B, frozen rates for Bands C, D and E, an increase to £250 for band F and an increase to £500 for band G. These rates would remain frozen to 2009, but would then be harmonised at new car rates in 2010.

The announcement at the 2006 budget of a band G was welcome, but as it only applied to new cars, it added a layer of complexity. Announcing the intention to harmonise rates for all cars by 2010 would also help Treasury simplify the process.

We also advocate that the Government press for a tougher and mandatory scheme for new cars, as the voluntary initiative has failed.

This reform would give a strong statement of intent that the Government is committed to ensuring the UK has a fuel-efficient car fleet – driving change among both manufacturers and the public. Overall, this VED reform would create a much stronger incentive for people to buy less polluting cars, and would complement the Government’s car labelling scheme. The changes could result in carbon dioxide savings of over 9 million tonnes CO<sub>2</sub> by end 2010.

For existing car users, people with cars in bands A-E will all have lower or the same VED until 2010. People with cars in bands F-G will see rises in 2007, then constant til 2010.

For new car purchases, VED rises steeply – creating a strong incentive for any new car purchaser to choose a greener model. This is essential given the backdrop of increasing purchases of gas guzzling vehicles. This is also a completely avoidable tax – if people buying a new car do not want to pay a £2000 annual VED, they have the choice buy a less polluting car.

A recent Guardian/ ICM poll in February 2006 showed that the majority of people (63%) approved of a green tax to discourage behaviour that harms the environment. Another poll, this time by Populus for the BBC’s Daily Politics Show in October 2006, found that 57% of people agreed that: “*the Government should impose higher taxes*

*on activities that cause pollution, even if that means the end of cheap flights and driving a car becomes more expensive.”* Considering the negative wording of the statement this is a very high figure, indicating considerable support for environmental taxes on transport.

We advocate that revenues raised be recycled back to people via spending to improve alternatives to motoring – as part of a general tax and spending strategy to reduce the overall environmental impact of road transport.

A common objection to taxes on gas guzzlers is that it will unfairly affect those living in rural areas who need a 4x4 for work or because they are affected by severe weather isolation. This could be addressed through intelligent policy design (such as VED discounts for those with rural postcodes) but it is not a legitimate reason for opposing rises in VED for the most polluting cars per se. In any case, there are more fuel efficient versions of these cars, which would not be paying the higher rates

## **Road Fuel Duty**

The price of fuel has a major effect on transport's carbon emissions. The Government's analysis of the fuel duty increases between 1996 and 1999 is that they produced annual carbon savings of between 1 and 2.5 MtC by 2010. The Institute for Fiscal Studies say that if real rates of duty had been maintained at 1999 levels, *“we might expect current fuel consumption to be around 4-5 per cent lower (and as much as 9-12 per cent lower in the long run)”*<sup>vii</sup>. And revenue could now be around £4.2 billion a year higher. Money that could have been spent on improving public transport.

Price is therefore deeply linked with emissions. However, despite the recent rises in the price of oil, according to Government figures in real terms motoring is still cheaper than 30 years ago (see graph 1 above). There are two main causes for this: First, the Government has kept road fuel duty constant – ie falling in real terms – since 2000; Second, other elements of car operating costs continue to fall.

In contrast, the price of alternatives to motoring – buses and trains – has risen dramatically, and continues to do so. Action is urgently needed to improve the affordability and quality of the alternatives to motoring.

Increasing fuel duty is the main tool the Chancellor has to reduce the growth in transport emissions. Moreover, it would raise revenue which is urgently needed to invest in decent alternatives – to provide affordable safe clean public transport, and to improve walking and cycling conditions, to make them an attractive alternative for short journeys, for example by providing Safe Routes to all schools to prevent parents feeling they have to drive their children there.

## What could the Chancellor do?

The Chancellor should announce a **reintroduction of the fuel tax escalator and use the revenue raised to invest in decent alternatives**, as his Pre-Budget Report of 1999 stated.

This would reduce traffic growth, and as a result cut carbon emissions and improve air quality, It would also have broad benefits on the economy. There would be less congestion, and it would reduce the UK's vulnerability to unstable and volatile global oil prices.

One argument often used against increasing fuel duty is that it would disproportionately hit the poorest. While it is true that among car owning households a rise in fuel prices will impact most strongly on the poorest,<sup>viii</sup> it is also true that less than half (47%) of the poorest fifth of households have a car, compared with 90% of the richest<sup>ix</sup>. Which means they are unaffected by the tax.

A 5% increase in the cost of fuel sees the cost of living of the poorest tenth of car owners rise by 0.36%, compared with a rise of 0.24% for the richest tenth. Here it is critical that the revenue raised from fuel duty is used to mitigate regressive effects.

Spending increased fuel duty on improved public transport and better walking and cycling conditions is progressive, as these modes are used more by poorer people generally. The poorest fifth of people make four times more bus journeys a year than the richest fifth, and the richest fifth of people make on average 500 more car journeys a year than the poorest fifth. This is an urgent social issue – millions of people do not have decent transport choices because of regressive transport prices and spending:

- Current prices are regressive – the Government states that “Public transport fares rose by about 75 per cent in real terms between 1974 and 2002”. This hits the poorest hardest.
- Current transport spending is regressive – the Government's figures show that 38% of transport spending benefits the richest fifth of people, while only 12% benefits the poorest fifth.

However because of the regressive impact on some low income car owning households it may be necessary for the Government to consider some general form of compensation (funded by the large sums raised by an increase in fuel duty across the population as a whole) for poorer households though cuts in the lowest rate of income tax and increases in the most widespread benefits. Other measures could include:

- improvements to rural public transport
- council tax rebates targeted at rural areas

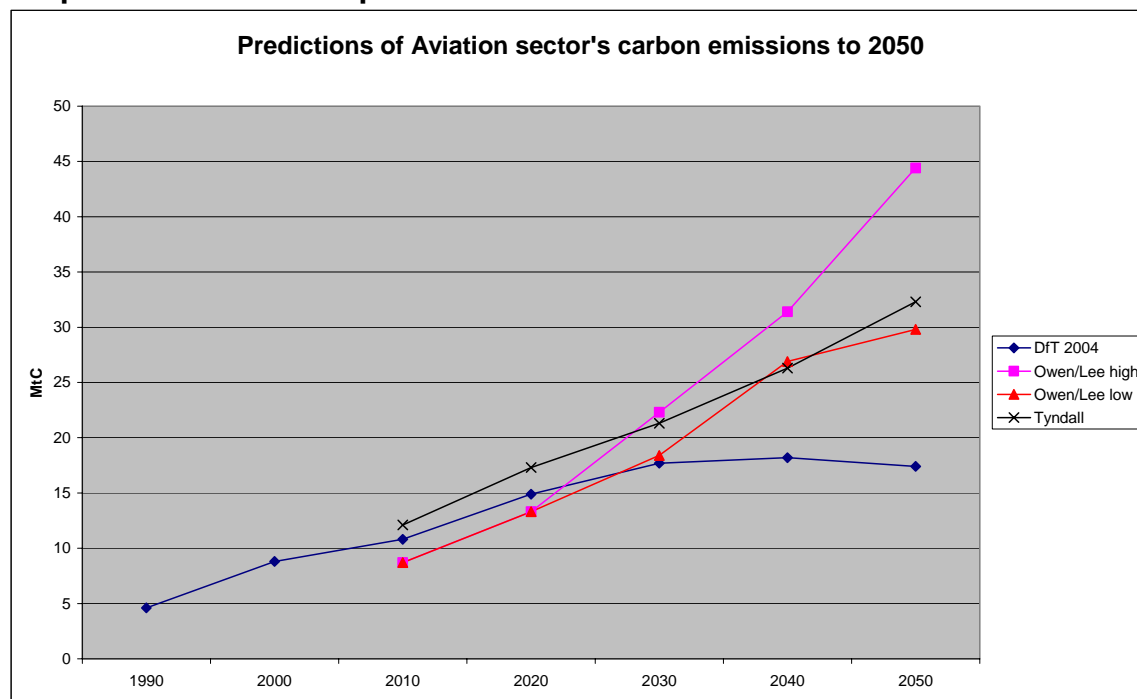
Broader measures to improve alternatives to motoring set out in the Way to Go Manifesto<sup>x</sup> of 30 social justice, environment and transport organisations include:

- Increased funding for public transport, particularly in rural areas
- A national railcard
- Lower speed limits: 20mph in residential areas
- Quality standards for bus and rail services
- Safe Routes to Schools, to stop the need for the school run

## Aviation

**The Aviation sector is the fastest growing area of carbon emissions. Emissions are predicted by DfT to more than triple by 2030 compared with 1990 levels; other more recent analyses suggest even higher rises (see graph 2). But even a mere tripling is incompatible with the Government’s targets to cut overall carbon emissions by 60% by 2050.**

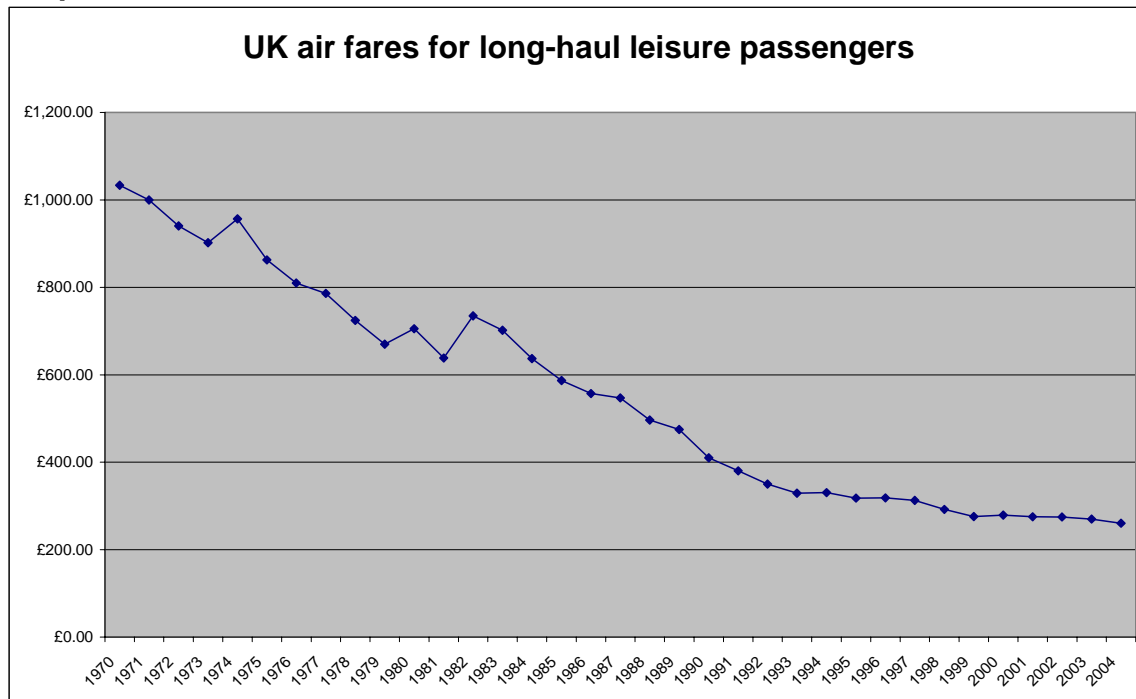
**Graph 2 Aviation’s predicted future carbon emissions**



(Source: University of Oxford, 2006. Predict and Decide. Environmental Change Institute)

Aviation’s emission increases are caused by rapidly increasing numbers of flights – the Department for Transport predicts increases to 476 million passenger journeys by 2030, up from 180 million in 2000. The average efficiency of aircraft has not changed much, some efficiency gains are predicted but these will be swamped by the growth in numbers of trips.

The number of flights has increased so rapidly because of the year-on-year falls in the cost of flying (see graph 3), in large part caused by aviation’s continued exemption from fuel taxes and VAT, and the very small contribution of Air Passenger Duty, which has been frozen and has therefore fallen in real terms in recent years.

**Graph 3 - UK air fares since 1970**

### Why the Chancellor should take action

The Government has recently pinned its hopes on including aviation into the EU Emissions Trading Scheme (EUETS) as its preferred method of tackling aviation's climate change emissions. Although it is possible that this might be effective in the longer term, the Government must take other actions, using taxation, to slow aviation growth now. This is for five reasons:

- First, it will be years before aviation can be included within EUETS. Measures are needed before that to bring aviation's ever-increasing emissions under control.
- Second, it is likely that aviation's inclusion within EUETS would not be environmentally effective. The aviation industry advocates EUETS as its favoured measure because it believes that EUETS, of all the possible measures, is the one least likely to mean they have to change. For example, Willie Walsh, Chief Executive of British Airways, said in November 2006 that he favoured aviation's inclusion in EUETS and that he didn't think the aviation sector should have to reduce its emissions, and that they were going to grow.<sup>xi</sup> The sector is already advocating large allocations of emissions for itself, contradicting Government policy that the polluter should pay.
- Third if other measures are not brought in now, aviation runway capacity is predicted to increase and the aviation sector will argue for even larger future

allocations to itself, meaning greater cuts will be required from other economic sectors, such as industry.

- Fourth, it is not a question of either emissions trading or other measures. Both are needed. If aviation is inside EUETS its current billions-a-year fuel tax-exemptions will have to be addressed otherwise aviation will receive a major unfair competitive advantage compared with other industrial sectors. APD could act as a proxy for fuel tax alongside ETS until international agreements are amended.
- Fifth, with limited technological options available, unconstrained growth will make climate change targets unachievable so the stark truth is that only measures that increase the cost of flying are going to be environmentally effective. If ETS doesn't achieve this then it's not working. The Government therefore needs to be honest and open with the industry and consumers about this reality so that they can plan for the future. A policy of progressive increases in APD would achieve this until an effective ETS is in place.

The tool to stop the cost of flying falling is **increases in Air Passenger Duty (APD)**. Doing this would reduce the rate of growth in aviation's emissions. If however the aviation industry argues that the cost of flying is not falling, then according to the Government's own figures there will be no need for new runways, and the industry can drop its proposals for airport expansion across the country.

There are a number of advantages to this increase in APD approach:

- APD is already in place, so increases are administratively simple.
- APD increases reflect environmental damage and will slow demand growth
- APD can be reformed to better reflect environmental damage. Longer journeys and seats taking more space already attract higher rates of APD. But APD could also be extended to include transfer passengers, and freight aircraft, or other factors.
- APD increases would help meet the Government's aim that the polluter pays – as set out in the Aviation White Paper.

It may also be worth considering revising APD to be charged by plane and its efficiency rather than by passenger, to encourage higher loading and development of more efficient aircraft. However, in the meantime, it is simpler just to raise APD now.

Analysis by Oxford University's Environmental Change Unit shows that increases in APD can prevent demand growth – with an annual escalator of around £10-25 per ticket, and **we advocate APD increases at £15 for intra-EU and £25 for extra-EU tickets. This would raise around an additional £1,700 million.**

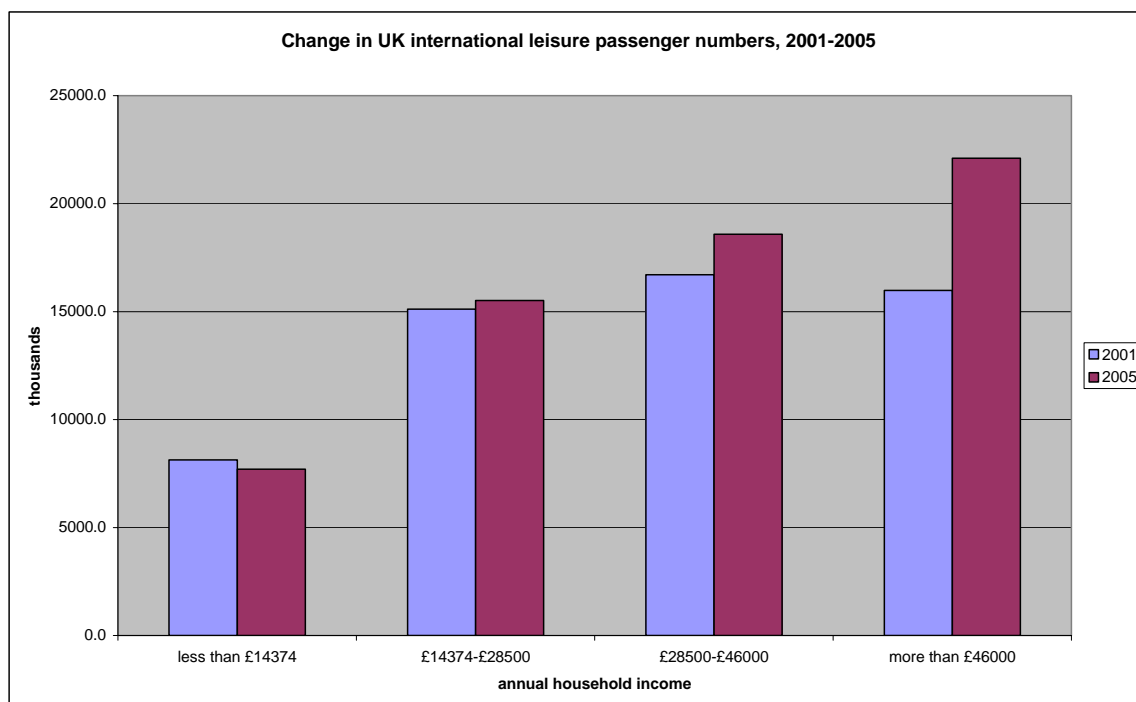
A statement from the Chancellor at the pre-budget on increased APD and a future escalator would signal the Government's commitment to bring aviation into the climate change regime, and the necessity of curbing aviation's carbon emissions.

Opponents of APD increases often claim three things.

- First, they claim that it would be environmentally ineffective. But the opposite is the case, it is precisely because it is effective that it is being opposed.
- Second, they claim that a tax on aviation would harm the UK economy. But this is exaggeration – and in fact there would be economic benefits if aviation expanded more slowly. For example expansion of aviation in line with the Aviation White Paper’s targets will lead to an increase in the UK net air travel spending deficit from £15 billion a year to £30 billion a year by 2030. The large flaws in the Industry’s economic claims are set out in a major new report from the University of Oxford.<sup>xii</sup>
- Third they claim that it would price poor people off the airlines. This is not the case either. APD increases would be broadly progressive taxation – poorer people fly far less often (see graph 4); In 2004 76% of passengers were from socio-economic groups ABC1, only 24% from C2DE.

Proponents of aviation often counter claim that although richer people do fly far more, falls in the cost of flying will mean more poorer people will fly in future. However this is not the case either - in the last five years the cost of flying has fallen – but poorer people fly less now (see graph 4). In November 2006 the Civil Aviation Authority said that the main effect of the growth of the low-cost airlines “*has been to provide further opportunities to those in middle and higher income groups to fly more often*”.

**Graph 4 - change in passenger numbers by income quintiles**



## Politics of aviation taxation

2006 MORI opinion polling<sup>xiii</sup> on public attitudes towards aviation and environment, and towards aviation taxation, showed that:

- the public favours slowing down the growth in air travel.
- when told about the links between aviation and climate change, the support for slowing down the growth in air travel increases – with support outweighing opposition three to one.
- this support holds across all age groups, all socio-economic groups, among supporters of all the main political parties and in all regions, irrespective of whether people are told about the links about climate change.
- **60% of people support increased taxes on air travel for environmental reasons, with 18% in opposition.**
- **73% of people support increased taxes on air travel if the money raised were spent on improving the environment; 9% oppose this.**

Other Government polling research<sup>xiv</sup> also suggests that action to tackle both expansion and the cheap cost of flying would not be unpopular. For example,

- 69% say they would be willing to pay more to fly to reflect environmental costs, 52% say they would pay an extra 20%
- 62% say we should limit the expansion of airports to protect the local environment (note this only applies to “local” environment – presumably this percentage would rise even further if the question had been broadened to include “global” environment).

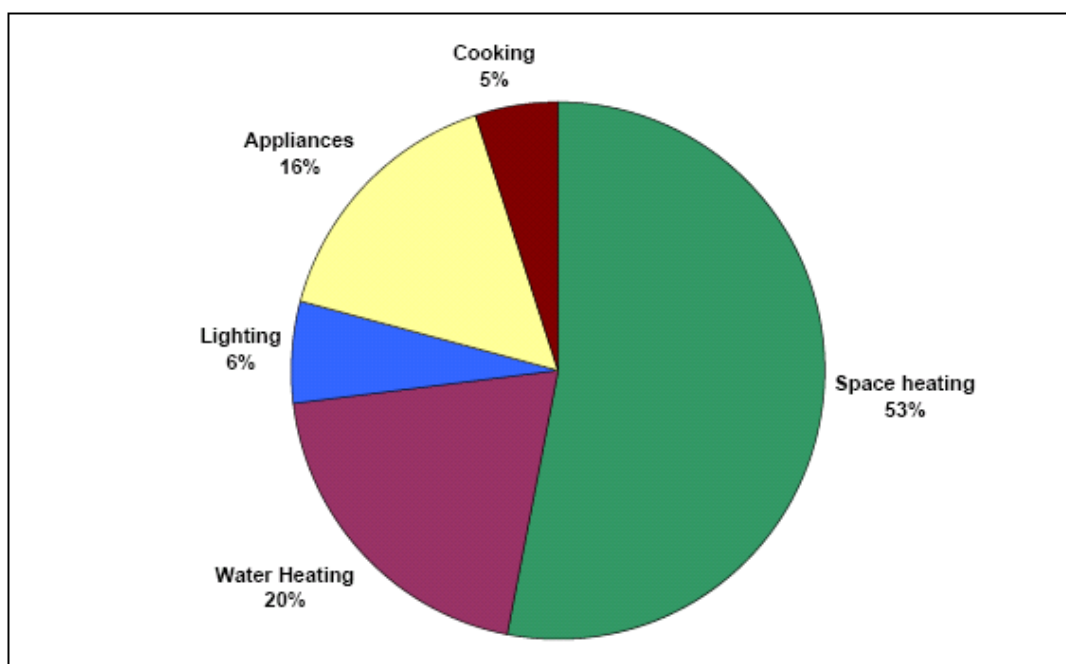
## Other measures on aviation

In addition, we advocate that aviation’s other tax exemptions are removed: remove the zero-rating for VAT; remove exemption on fuel taxes, starting with domestic flights, but working internationally to be able to charge it on all flights. These are perverse historical anomalies inappropriate for a mature sector like aviation.

## The domestic sector

**In 2004 the domestic sector was responsible for 27% of total UK carbon dioxide (CO<sub>2</sub>) emissions or 41.4 Million tons of Carbon (MtC). In order for the Government to meet its target of reducing UK CO<sub>2</sub> emissions by 60% by 2050 emissions from the domestic sector need to fall to 17MtC.<sup>xv</sup> Over 70% of the carbon emissions from the sector are caused by space or water heating.**

### Domestic carbon emissions - 2005



Source: DEFRA

The domestic sector has massive potential to reduce emissions in two ways: energy efficiency and new micro-renewable energy generation technologies. We advocate two key spending measures to give these a kick start. Energy efficiency makes financial sense but has low uptake due to high capital costs. We advocate new funding for Council Tax rebates to roll out basic energy efficiency measures nationwide.

Microgeneration technologies are a huge economic opportunity for the UK economy, but the sector needs significant pump-priming and householders need capital support to bridge the high capital costs and long payback times. Here too the Government should make much greater funding available. A range of other fiscal incentives including changes to VAT can help to increase the take-up across the domestic sector.

**Box 1: Domestic Efficiency Measures – estimated costs & savings**

Measures	Average cost (£)	Cost saved (£/yr)	Carbon saved (kgC/yr)	Pay-back (yrs)	Potential homes ('000) †	Potential total carbon saving (MtC/yr)
Hot water cylinder insulation	14	29	53	0.5	1,137	0.1
Cavity wall insulation	342	133	242	2.6	8,500	2.1
Loft insulation (full and top-up)	284	104	190	2.7	6,186	1.2
Improved heating controls	147	43	77	3.4	2,102	0.2
Draught proofing	100	23	43	4.3	9,793	0.4
Micro CHP	1,571	230	508	6.8	12,000 <sup>4</sup>	6.1
Solid wall insulation	3150	380	694	7.5	7,479	5.2
A-rated boiler	1,500 <sup>1</sup>	168	177	8.9	17,128	3.0
Micro wind	2,363	224	263	10.5	- <sup>2</sup>	-
Ground source heat pump <sup>3</sup>	4,725	368	990	12.8	17,000	16.8
Photovoltaic (PV) electricity	9,844	212	249	46.4	9,892	2.5
Solar water heating	2,625	48	88	54.7	19,330	1.7
Windows (Single to Double Glazing)	4,000 <sup>1</sup>	41	26	97.6	10,746	1.7

Source: *The First Draft Illustrative Mix of Measures for EEC 2008-11 (Defra), 2006* and †*Buildings Research Establishment (BRE), 2005*

The table above (taken from the recently published DCLG Review of the Sustainability of Existing Buildings) shows that through a combination of existing energy efficiency and microgeneration technologies, savings in carbon emissions totalling 41 MtC/yr are achievable, equivalent to 100% of the current carbon emissions of the domestic sector. Clearly not all potential homes will be suitable for all measures and 'comfort taking' could reduce their impact. However savings of only 25.5 MtC/yr are needed to cut emissions from the domestic sector by 60%.

Reducing carbon emissions from the domestic sector would also have numerous economic and social benefits for the UK including job creation and tackling fuel poverty. While building regulations for new-build should be tightened, the higher priority for the Government should be reducing carbon emissions from the existing stock. These homes are likely to contribute 70% of the housing stock of 2050.

## Energy efficiency

Energy efficiency measures provide the opportunity for the UK to reap an early and cheap harvest in cuts carbon emissions while benefiting the economy and meeting other social policy objectives.

The UK has one of the most energy inefficient housing stocks in Europe. Fuel poverty (defined as spending more than 10% of income on heating their homes)

continues to affect over 2 million households. The Government is committed to eliminate fuel poverty in England by 2010 and throughout the UK by 2018. Astonishingly there are still 1.1million households that lack even hot water cylinder insulation, a measure which has been available for over half a century,<sup>xvi</sup> costs on average just £15 and has a payback time of 6 months.<sup>xvii</sup>

The Government's own Energy White Paper identifies energy efficiency as the cheapest, cleanest and safest method of reducing carbon emissions.

## **Measures the Chancellor should take:**

### **Council Tax rebates**

Despite being highly cost effective, up-front capital costs are still a barrier to take-up of basic energy efficiency measures.

In November 2004 Braintree Council instituted a scheme with British Gas which gives a £100 Council Tax rebate to households installing Cavity Wall Insulation (CWI). The scheme has proved successful and has been extended to a pilot project of 16 other authorities. Council Tax rebates have the advantage of working through the owner-occupier sector quicker than Stamp Duty rebates because they can be actioned at any time.

The Treasury should support such schemes both by meeting the financial cost to Local Authorities and with advice on administration. The timing of the report of Lyons Inquiry into Local Government Funding and the Pre-Budget Report provides the perfect opportunity to address this situation.

A fixed lump sum rebate as is used in the Braintree scheme has a number of advantages over a percentage-based rebate. It is socially progressive as it is worth more to poorer families, is cheaper to administer and would allow the Treasury to predict the cost more accurately.

There are currently 8.5 million homes with potential for CWI installation and 6.2 million who lack loft insulation. These two highly cost effective measures alone would save 3.3 MtC annually (13% of the 2050 target). Friends of the Earth calls on the Government to establish a £1.4bn<sup>xviii</sup> fund to provide a £100 Council Tax rebate to those who install either CWI or loft insulation. Both measures have payback times of well under three years, giving householders the immediate prospect of seeing their investment pay off.

### **Stamp Duty**

Stamp Duty rebates should be made for both new build properties that meet the 'ECO Homes Excellent' standard and existing properties where the new owner makes energy efficiency improvements within the first six months after purchase.

Research by Sheffield University has shown that the time of purchase is the moment at which home owners are most likely to make home improvements.

The inspection scheme for Energy Performance Certificates included in Home Information Packs could facilitate a Stamp Duty rebate scheme.<sup>xix</sup> The Building Research Establishment (BRE) has developed the 'ECO Homes XP' package to specifically assess the energy performance of the existing housing stock.

### **VAT on energy saving equipment, materials and their supply and installation**

The 2002 Budget introduced a reduced rate of VAT for the installation of a number of energy saving measures (including energy efficiency and microgeneration measures). The cost to the Treasury is small at around £50m<sup>xx</sup>. However this currently excludes such basics as energy efficient light-bulbs. The omission of some installed energy saving/efficient products and materials (and all DIY products) continues the extraordinary situation where energy use is taxed at a lower rate than energy conservation.

The Government should apply the reduced 5% rate VAT to the supply and installation of a wider range of energy saving products and materials, and actively engage in negotiations at an EU level so that VAT levels can be lowered further in the future. This should include reducing the VAT on products and materials bought for DIY as well as professional installation. According to the Association for the Conservation of Energy (ACE) the application of reduced VAT on DIY products would particularly benefit lower income households who are more likely to install their own insulation.<sup>xxi</sup>

### **Landlord's Energy Saving Allowance**

According to ACE the private-rented sector contains a very high proportion of energy inefficient properties.<sup>xxii</sup> The 2004 Budget introduced a Landlord's Energy Saving Allowance covering capital expenditure of some forms on insulation (and extended in Budget 2006). Friends of the Earth welcomes this and supports the demand of ACE and others that the scope of the relief should be expanded to cover many more energy saving products and micro-generation technologies, and to a much higher value than the £1,500 currently allowed.

### **Energy Efficiency Commitment**

Under the Energy Efficiency Commitment (EEC), electricity and gas suppliers are required to achieve targets for the promotion of improvements in domestic energy efficiency through, for example, delivering subsidised Cavity Wall Insulation (CWI) or distributing low energy light bulbs. At least half of energy savings must come from 'the priority group': low-income consumers in receipt of certain 'trigger' benefits. The scheme is administered by Ofgem.

Friends of the Earth supports the call of the Sustainable Development Commission that targets for the third phase of the Energy Efficiency Commitment (2008-2011) should be at least three times those for the first phase. Combined with Council Tax rebates for CWI and loft insulation this would make an effective package. EEC III should be more flexible to allow companies to reduce the carbon emissions of households by including the option of the installation of microgeneration technologies.

## Microgeneration technologies

A major part of the solution to domestic sector emissions would be for households to generate their own renewable heat and power.

According to the DCLG Review of the Sustainability of Existing Buildings *“Under current existing [housing] stock conditions and with currently known technologies...a 60% reduction [in carbon emissions] would require the application of microgeneration technologies.”*

While energy efficiency measures usually offer a more cost effective means of reducing carbon emissions initially this is no reason to neglect the contribution microgeneration can make now. Many newer homes and certain other types of properties have limited scope for reductions in carbon emissions from energy efficiency measures alone.

Measures to promote microgeneration technologies, like renewable technologies generally, also offer considerable benefits to the UK economy at large. Countries that have invested in renewable energy have reaped the economic benefits. The German solar industry has increased turnover ten-fold in the last six years, is worth 3.7 billion euros annually and employs 42,500 people in production, distribution and installation<sup>xxiii</sup>.

Waiting until the possibility of energy efficiency measures are exhausted to start to develop a domestic microgeneration strategy would risk the UK falling far behind other countries and losing the opportunity to gain from international microgeneration markets.

Electricity demand for products is predicted to grow, and if climate change impacts worsen the demand for electricity for air conditioning is likely to grow also. To prevent carbon increases from this, low-carbon electricity technologies will be needed – this is a powerful reason for greater investment in microgeneration.

There are numerous micro-generation solutions available for a wide variety of housing situations:

- Solar photovoltaics: converting solar energy into electricity
- Solar thermal collectors: using solar energy to heat water
- Heat pumps
- Micro-wind turbines
- Micro-hydropower turbines
- Wood-fuel boilers
- Micro combined heat and power units

Highly visible micro-generation schemes, especially on public buildings and larger developments, can be a major driver of behaviour change in society at large.

### **Measures the Chancellor should take:**

#### **Grant subsidies**

According to the Sustainable Development Commission high up-front costs deter households from investing in micro-generation technology.<sup>xxiv</sup> Grants offer a way to reduce the initial outlay.

The recent media coverage that the Low Carbon Buildings Programme (LCBP) had exhausted its funding for grants for domestic micro-generation revealed the massive gap between the level of demand among the public for micro-generation and the Government's willingness to financially support these technologies. The LCBP household grants totalled just £6.5m for three years until 2009. The grant funding available for 2006 ran out just half way through the year.

The Government has now topped up the funding available for the scheme to £12.7m until 2008. This works out at just 58p for each household in England and Wales. Put another way this would provide grants for less than 3000 properties (out of an estimated 9.8 million potentially suitable homes<sup>xxv</sup>) to install the cheapest solar PV system currently available from Currys or for 28,000 homes to install B&Q wind turbines.<sup>xxvi</sup>

Friends of the Earth believes that this is entirely inadequate and the Government needs to make a quantum leap in its financial support for micro-generation if these technologies are to be rolled out across the domestic, public and commercial sectors with any speed. The total LCBP is currently £80m.

The Stern Report argues that "*uncertainty about the long-term future framework for carbon pricing is also a reason why additional measures to encourage the development of low-carbon technologies are important.*"<sup>xxvii</sup> It calls for up to a five-fold increase in deployment incentives. However, given the absence of effective carbon pricing and the UK's trailing position in terms of support for the renewables industry, a more than ten-fold increase on the current levels to £1 billion is needed.

**‘Sell-in’ or ‘export tariffs’**

Tariffs that allow households investing in microgeneration schemes to sell their electricity back to the grid would significantly reduce the payback time for these technologies (for example a Photo-voltaic system is especially costly with a 1.5kw array costing around £9,000 and a payback time of several decades) and thus increase the incentive to homeowners. There is currently no obligation for energy suppliers to pay a standard tariff on electricity exported from micro-generation.<sup>xxviii</sup> In Germany legislation to allow householders to sell electricity to the grid has been in place for over a decade with current sell-in tariffs at 35p/kWh.<sup>xxix</sup> A fair settlement would see the same tariffs paid for microgeneration exports to the grid as for other renewable electricity.

The Chancellor should signal his support at the Pre-Budget Report for a standardised fair scheme of export tariffs to reduce pay-back times for investment in microgeneration.

**Fiscal measures:**

There are a number of measures the Chancellor should take which will provide fiscal incentives for microgeneration or eliminate disincentives:

- The Chancellor should ensure that businesses installing micro-generation do not see their financial gains wiped out by an increase in their rateable value.
- Domestic micro-schemes exporting energy to the grid should not pay tax on the value of the export (assuming a proper system of sell in tariffs is established).
- The Chancellor should allow landlords the same fiscal incentives for micro-generation as for energy efficiency measures under the Landlord’s Energy Saving Allowance.
- The UK should actively engage in negotiations for further VAT reductions to be allowed by the EU on microgeneration measures both installed and DIY.

**Other domestic measures****VAT on refurbishment**

It is time to end the anomaly where new build housing is zero rated for VAT but refurbishment attracts the full rate of 17.5%. Friends of the Earth agrees with the Sustainable Development Commission that a reduction of the VAT rate on refurbishment to high environmental standards, of which energy efficiency is one part, is needed to eliminate a perverse incentive to demolish homes in existing

communities. <sup>xxx</sup> EU law currently allows a reduced rate of VAT to be applied to refurbishment. The Government should apply this rate and actively engage in negotiations at an EU level to allow a further reduction.

### **Energy Saving Companies.**

Friends of the Earth welcomes the provisions of the Local Government White paper 'Strong and Prosperous Communities' (DCLG 2006) which support the creation of Energy Services Companies (ESCOs) along the lines of the model pioneered by Woking Borough Council. The White Paper acknowledges that DEFRA is examining ways of encouraging the take up of ESCOs in the 'core cities'. While this encouragement is welcome it is important to recognise that local authorities will continue to require direct financial support in terms of Grant Aid to kick start these companies. The experience of Woking Borough Council indicates that once established these companies offer substantial returns in the long term. It is this initial financial incentive which is the major blockage to delivery.

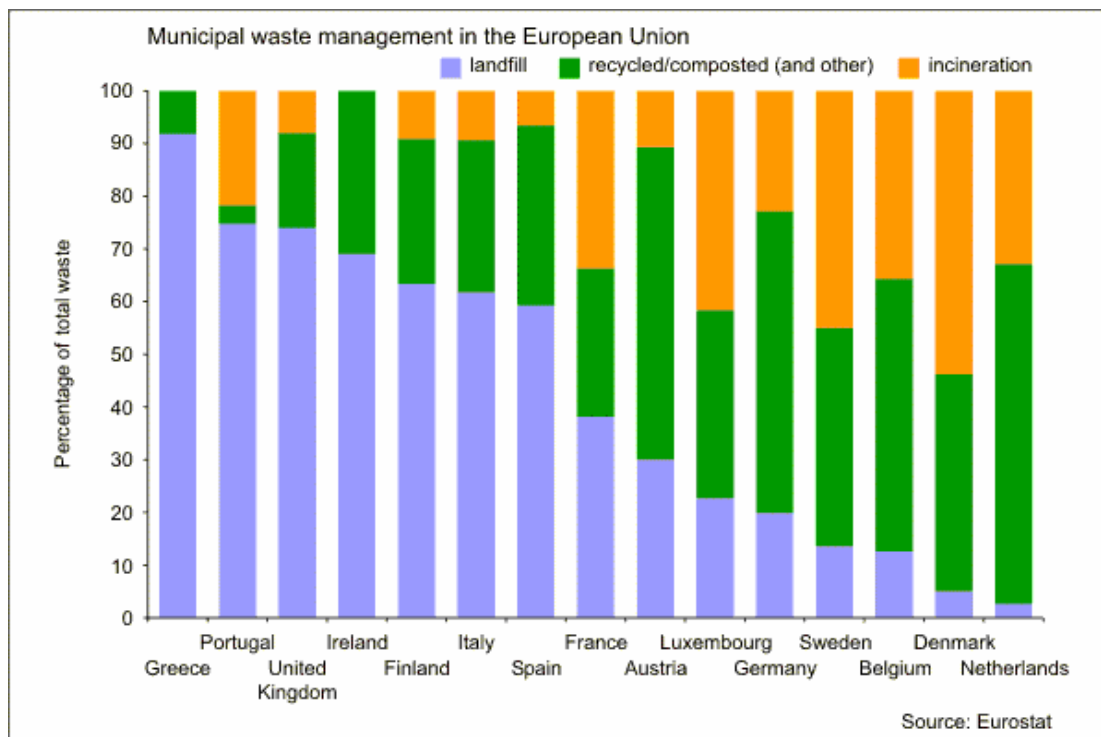
## Waste and recycling

The Government has European obligations to dramatically reduce the amount of material going to landfill. It also has a repeatedly stated commitment to implementing the waste hierarchy. As well as meeting waste goals, this will help reduce climate emissions, either here or abroad. DEFRA has said recently that greenhouse gas emissions from landfill are twice as large as previously thought, and recycling reduces the need for extraction and processing of new resources, thus reducing climate emissions. Recycling in the UK is already saving around 10-15 million tonnes of CO<sub>2</sub> equivalent per year, equivalent to taking 3.5 million cars off the road.<sup>xxx1</sup>

Measures to reduce waste will also help the Government’s resource productivity agenda, and its aim for the more “prudent use of natural resources”. The Chancellor’s April 2006 speech to the United Nations said “*Of course increasing labour productivity has always been a core goal of all successful businesses. Now as energy costs rise and materials become more scarce, we need to pay the same attention to resource productivity.*”

However, despite progress with the landfill tax, a step-up is required. The UK is way behind other EU states in its progress towards the Landfill Directive, and on recycling (see graph below)

**Graph 5 – waste disposal options in the European Union**



Source: <http://www.defra.gov.uk/environment/statistics/waste/kf/wrkf08.htm>

To help meet the Government's waste and climate change goals, the Chancellor can:

- **Increase the landfill tax escalator to £8 a year**

A higher landfill tax will divert more resources towards re-use and recycling. DEFRA has estimated that a rate of £75 per tonne by 2013 would make alternatives to landfill sufficiently attractive to change behaviour. The current rate is £21 per tonne with an escalator of only £3 per year.

We suggest that part of the increased revenue should be used to fund decent recycling services. The Household Waste Recycling Act requires local authorities to introduce doorstep recycling to every household by 2010. Providing a top quality doorstep recycling collection of household waste across England and Wales will cost £375 million; landfill tax raised around £700 million in 2005-06.

- **Introduce a £1 escalator for the “reduced rate” of landfill tax.**

Since the landfill tax was introduced in 1996, the “reduced” rate for “inert or inactive” waste like minerals has remained constant at £2 per tonne (ie falling in real terms). This lower rate reflects the lower pollution caused by these wastes at landfill sites. However, there are environmental problems at the other end of the resource chain through the extraction of these resources. The current fixed rate creates no incentive to re-use or recycle these materials. We suggest that the Chancellor introduces a £1 escalator to signal that this area should come under closer scrutiny, and consult over other measures to reduce this type of waste.

- **Reduce the landfill tax to £7 per tonne for Mechanical Biological Treated (MBT) waste**

Waste that has had MBT treatment currently pays the full landfill tax. However, this treatment removes metals, plastics and glass, and biologically decomposes the remainder by composting or anaerobic digestion, thus reducing biodegradability and reducing methane emissions at the landfill site. This treatment therefore reduces the volume and environmental impact of residual waste going to landfill, and should therefore pay a far lower rate of landfill tax. A figure of £7 per tonne would reflect the reduced greenhouse gas emissions from this treatment.

### **Other measures to implement the waste hierarchy:**

As waste is diverted from landfill, in order to maximise environmental benefits, it is important that waste is not simply diverted to the next worst option – incineration. There are for example far higher carbon savings from recycling than there are from even the least-worst forms of incineration. However there are at present few economic signals to promote recycling ahead of incineration, and indeed some incentives for incineration. We recommend that the Chancellor:

- **Commits to including incineration in a broader tax covering all disposal.**

This would reflect the position of incineration below recycling, reduction and reuse in the waste hierarchy, and also the greater carbon savings further up the hierarchy. To reflect the relative impacts a rate of at least £15 a tonne is appropriate for electricity-only generating incinerators. It should be less for CHP generators. In addition, current incentives for various forms of incineration – through the Renewables Obligation and the Climate change Levy - should be removed.

Finally, new technologies can also help the Government's goals on waste and climate change, but will require help to maximise their potential. The Chancellor could:

- **Set-up a system of Enhanced Capital Allowances for Anaerobic Digestion**

Anaerobic digestion is a new technology can reduce waste and carbon emissions. The Stern Review notes the success in the USA of providing a variety of types of state funding to help with upfront investment costs.<sup>xxxii</sup> We suggest that the Chancellor set up a system of Enhanced Capital Allowances or other incentives to encourage the wider take-up of this new technology.

## Power Generation and Business Emissions

**The energy supply sector is the single biggest contributor to the UK's carbon dioxide emissions. It was responsible for about 58 MtC or 38 per cent of net CO<sub>2</sub> emissions in 2004.**

**Emissions from the energy supply sector include those from the production of fuel for final consumption by other sectors. This includes electricity generation, oil production and refining, gas production and transmission, and the production of coal and other solid fuels.**

Unfortunately the Chancellor's only response to Stern that affects the power and business sectors has been to call for more emissions trading by expanding it to include more sectors and more countries. Yet trading through the European Union Emissions Trading Scheme has been failing and the signs are that it will continue to do so unless there is a sea-change in the negotiations. Trading is fast becoming the Chancellor's policy fig-leaf on climate change and one that is in danger of shrivelling up leaving him exposed.

Emissions trading has a part to play in realising the opportunities of tackling climate change decisively but it is no golden bullet – indeed at present the EU trading scheme is firing blanks.

**The EUETS is failing in three regards:**

### **Failing to cut emissions**

Emissions have remained flat and current national plans for the next phase through to 2012 will not change that putting into jeopardy the existence of any carbon market in the long-term. So far EU states have collectively submitted national allocation demands for the next phase of the EUETS that would result in a 15% rise in emissions from 2005<sup>xxxiii</sup>.

### **Failing to get polluters to pay for the damage they caused.**

The practice of handing out allowances free has according a report resulted in Britain's power-generators alone making a profit of around £800 million in the schemes first year<sup>xxxiv</sup>.

### **Failing to get industry to invest in cleaner technology.**

The short time-horizons of the scheme (2005-2007 followed by 2008-2012) are too short for companies to factor in the cost of carbon into investment plans.<sup>xxxv</sup> The weak cap and free allocations just exacerbate this problem by failing to give business a clear signal that carbon prices will rise in the long run.

Gordon Brown at this Pre-Budget should make two things absolutely clear.

First, he recognises that if emissions trading is to play an effective part in tackling climate change it requires far tougher caps and far fewer free allowances to big polluters.

Second, he is committed to using national policies alongside international emissions trading to reap the rewards of tackling climate change now.

If he does not make these points clearly he runs the risk of being seen as a Chancellor who was prepared to shunt climate change into a lengthy and currently ineffective international process thus avoiding any potential political heat. In fact what the people of the UK and our economy desperately needs is for the Chancellor to show vision and leadership in transforming the UK economy into a successful low-Carbon future that will benefit everyone.

### **Measures the Chancellor should take:**

#### **Increase the Climate change levy**

The Climate Change Levy (CCL) has been proved to be an effective policy at increasing energy efficiency and reducing CO<sub>2</sub> emissions in British businesses since it was introduced in 2001. According to one study the CCL will cut business energy demand by 2.9% by 2010 (minus the impact of the Chancellor freezing the rate) and business CO<sub>2</sub> emissions by 3.7 MtC per year by 2010.<sup>xxxvi</sup>

A survey of businesses completed 18 months after the introduction of the Levy<sup>xxxvii</sup> found that it had helped increased the use of renewable energy by businesses, helped increase energy efficiency and raised awareness amongst senior managers about the needs to address energy use and climate change. Crucially the survey found that many of these changes had been considered before the Levy but it was the financial incentive that provided the immediate stimulus to take action.

Yet the Chancellor has frozen the rate in successive budgets reducing its effectiveness.<sup>xxxviii</sup> One clear and immediate response to the Stern Report would be for the Chancellor to not only announce that the Levy will no longer be frozen but that at Budget 2007 he will announce a series of increases in the Levy over the next five years to increase efficiency, cut emissions and boost the take up of renewable energy further.

#### **Offshore renewables tax credit**

The Chancellor should announce a tax credit of at least 50% of the cost of developing and installing off-shore renewable energy.

Britain has the highest potential for off-shore renewable energy generation in Europe. Technologies such as off-shore wind, wave-energy and tidal currents have a key role in a low-carbon economy and offer significant economic opportunities for the UK. Tax credits for developing and installing these renewable resources will reduce

their cost and investment risk. It will speed up investment rates, increase technological innovation, reduce the costs of future investments and create major opportunities for UK businesses here and abroad. Companies would be able to deduct 50% of the qualifying expenditure when calculating profits to be taxed (this would be addition to other available allowances).

Other countries are already benefiting from the development of expertise, patent holdings, manufacturing capacity and market share in this rapidly expanding sector of power generation. Denmark, Spain and Germany have rates at least 10-times higher than the UK.<sup>xxxix</sup>

### **Renewable energy on farms**

Farmers and renewable energy are typically good partners. Farmers in Denmark, often working cooperatively, have been central to the Danish wind-power revolution and the supply diversity it brought. As well as receiving subsidies for capital investment, farmers have enjoyed a tax exemption of 40% on the income from electricity sold. The United States which continues to be the world's largest wind-power market has the Home and Farm Wind Energy Systems Act that proposes a 30% investment tax credit for investments in wind power.

### **Windfall tax on oil companies**

Shell and BP's combined profits for 2005 totalled £24bn<sup>xl</sup>. The recent large windfall profits by oil companies based on the rises in global oil prices could be taxed by Government to provide a multi-billion pound fund for investing in renewable technologies to heat and power public buildings. This would be a spur for innovation, reduce the medium and long term energy costs for public buildings, and reduce climate emissions. It could also provide the revenue for the renewables tax credit above.

## Other measures

### **Sterling Stamp Duty (SSD) for Millennium Development Goals**

Friends of the Earth is part of the Stamp Out Poverty Network of unions, development, environment, and faith NGOs, calling for a Sterling Stamp Duty (SSD) levied on all Sterling transactions, with the revenues used to help fund the Millennium Development Goals.

Even an extremely low rate of 0.005% on all Sterling transactions would raise over £1 billion annually. Detailed analysis of the effects of such a tax by Intelligence Capital Limited<sup>xlii</sup> “*shows that the UK Government could unilaterally implement the SSD in a cost effective way that causes minimum disruption to sterling currency markets*”, and in addition there would be extremely low likelihood or possibility of tax evasion.

## References

---

- i excluding international aviation and shipping figures (according to the respected Tyndall Centre including these sources would mean that emissions are now higher than in 1990).
- ii Statement of Intent on environmental taxation. HMT, 2 July 1997.
- iii IFS, 2006. The UK tax system and the environment.
- iv IFS, 2006. The UK tax system and the environment.
- v IFS, 2006. The UK tax system and the environment.
- vi [http://www.dft.gov.uk/stellent/groups/dft\\_transstats/documents/downloadable/dft\\_transstats\\_613483.pdf](http://www.dft.gov.uk/stellent/groups/dft_transstats/documents/downloadable/dft_transstats_613483.pdf), section 3.7
- vii IFS, 2006. The UK tax system and the environment. Page 39.
- viii IFS, 2006. The UK tax system and the environment. Page 38
- ix DfT National Travel Survey 2005 table 5.4(a)
- x [http://www.foe.co.uk/resource/reports/paying\\_for\\_better\\_transport.pdf](http://www.foe.co.uk/resource/reports/paying_for_better_transport.pdf)
- xi Friday 3<sup>rd</sup> November. Radio 4 Today Programme, 8:10am.
- xii University of Oxford, 2006. Predict and Decide. Environmental Change Unit.
- xiii [www.ipsos-mori.com/polls/2006/aet.shtml](http://www.ipsos-mori.com/polls/2006/aet.shtml)
- xiv [http://www.dft.gov.uk/stellent/groups/dft\\_transstats/documents/page/dft\\_transstats\\_613444.hcs\\_p](http://www.dft.gov.uk/stellent/groups/dft_transstats/documents/page/dft_transstats_613444.hcs_p)
- xv Review of the Sustainability of Existing Buildings, The energy efficiency of dwellings – initial analysis, DCLG, Nov 2006.
- xvi Stock Take: Delivering improvements in existing housing. Sustainable Development Commission 2006
- xvii Review of the Sustainability of Existing Buildings, The energy efficiency of dwellings – initial analysis, DCLG, Nov 2006.
- xviii Providing a £100 rebate for the 8.5m homes that lack CWI and £100 rebates for the 6.2m homes that loft insulation would require a fund of £1.4bn. There is likely to be considerable overlap which will make many homes eligible for a maximum potential rebate of £200 in any one year. However householders in receipt of certain trigger benefits will be eligible for loft and CWI free as part of the Energy Efficiency Commitment. That and other schemes mean that it may be unnecessary for the Government to finance a rebate for every potentially eligible household.
- xix An example of an Energy Performance Certificate can be found at: [www.communities.gov.uk/pub/761/EnergyPerformanceCertificateSample\\_id1500761.pdf](http://www.communities.gov.uk/pub/761/EnergyPerformanceCertificateSample_id1500761.pdf)
- xx The UK Tax System and the Environment, Institute for Fiscal Studies, 2006.
- xxi Memorandum by the Association for the Conservation for Energy to the Environmental Audit Committee inquiry into the Pre-Budget Report 2005.
- xxii Stock Take: Delivering improvements in existing housing. Sustainable Development Commission 2006.
- xxiii Federal Ministry of Economics and Technology (2004), citing Bundersverband Solarwirtschaft BSW.

- 
- xxiv Stock Take: Delivering improvements in existing housing. Sustainable Development Commission 2006.
- xxv Review of the Sustainability of Existing Buildings, The energy efficiency of dwellings – initial analysis, DCLG, Nov 2006.
- xxvi This is based on 21,660,475 households in England and Wales according to the 2001 Census. B&Q are currently advertising wind turbines and installation for £1498. The grant available from the LCBP is a maximum of 30% of the cost. According to Currys website solar PV systems start from around £9000. The grant available from the LCBP is a maximum of 50%.
- xxvii Stern Review: The Economics of Climate Change (HMT 2006). P347.
- xxviii Unlocking the Power House: Policy and system change for domestic micro-generation in the UK. Sussex Energy Group, 2006.
- xxix Alan Simpson MP. Opposition day debate on environmental taxation, House of Commons, 16 Oct 2006.
- xxx BREEAM ECO Homes Excellent or equivalent standard for homes and BRE 2006 standards for commercial and public buildings.
- xxxi Environmental benefits of recycling: An international review of life cycle comparisons for key materials in the UK recycling sector”, Waste & Resources Action Programme, 2006. [http://www.wrap.org.uk/downloads/LCA\\_report\\_Executive\\_Summary\\_May\\_2006.598516be.pdf](http://www.wrap.org.uk/downloads/LCA_report_Executive_Summary_May_2006.598516be.pdf)
- xxxii Section 17.5, Page 390.
- xxxiii Environment Commissioner Stavros Dimas recently stated that: “the first 17 notified national allocation plans [for 2008-12], propose a cap about 15% above actual emissions in 2005”.
- xxxiv IPA Energy Consulting, November 2005. Implications of the EU Emissions Trading Scheme for the UK power generation sector. Report to DTI. The Stern Report highlights that free allocations tend to distort competition, dampen incentives and deliver windfall gains to polluters and consequently advocates more auctioning of permits.
- xxxv ‘Terminating greenhouse gases’ The Economist October 21<sup>st</sup> 2006 p14
- xxxvi Cambridge Econometrics and Policy Studies Institute for HM Customs and Excise cited in Budget 2005, p159
- xxxvii Ekins, P., Monkhouse, C. and Willis, R., 2002. Next Steps for Energy Taxation: A survey of Business Views. Green Alliance/IPPR, London.
- xxxviii Budget 2005, Table A1: Budget 2005 Policy Decisions notes that the freeze in 2005 alone would reduce the tax incentive by £20 million per year
- xxxix Wind Energy Barometer at [http://www.energies-renouvelables.org/observ-er/stat\\_baro/observ/baro171.pdf](http://www.energies-renouvelables.org/observ-er/stat_baro/observ/baro171.pdf)
- xl Hooked on Oil. New Economics Foundation and WWF. October 2006
- xli Intelligence Capital Limited, 2006. A Sterling Solution. London.

### **For further information contact:**

The New Economics Team, Friends of the Earth, 26-28 Underwood St, London, N1 7JQ.

Tel: 020 7490 1555. Email: [dave.timms@foe.co.uk](mailto:dave.timms@foe.co.uk)