



# Taxation

CLIMATE CHANGE BRIEFING PAPER

## Climate change briefing papers for ACCA members

Increasingly, ACCA members need to understand how the climate change crisis will affect businesses. This impact can be felt throughout an organisation as a consequence of changing taxation, carbon trading, new reporting requirements, different management needs, formulating adaptation policies, or changes required in governance.

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ACCA climate change briefing papers include the following titles:

1. adaptation
2. governance and management
3. investment
4. mitigation
5. taxation.

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## About the author

Professor Paul Ekins has a PhD in economics from the University of London and is Professor of Energy and Environment Policy at the UCL Energy Institute, University College London, before which he was Head of the Environment Group at the Policy Studies Institute and then Professor of Energy and Environment Policy at King's College London. He is also a Co-Director of the UK Energy Research Centre and Director of the Green Fiscal Commission. From 2002-2008 he was a Member of the Royal Commission on Environmental Pollution. His academic work focuses on the conditions and policies for achieving an environmentally sustainable economy, with a special focus on environmental taxation, energy policy, innovation, the role of economic instruments, sustainability assessment and environment and trade. He is the author of numerous articles and books, among which, co-edited with Mikael Skou Anderson, is *Carbon-Energy Taxation: Lessons from Europe* (Oxford University Press, Oxford), which will appear later in 2009.

## Taxation: A UK Perspective by Professor Paul Ekins

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The UK government has now legislated statutory carbon budgets in three five-year periods to 2022, in pursuit of an overall legal commitment to an 80% reduction by 2050. These carbon budgets, which envisage a minimum 34% reduction in greenhouse gas emissions by 2020 (29% reduction in carbon dioxide emissions) are challenging. The question arises as to how they might best be met.

*The Stern Review: The Economics of Climate Change* (2007) identified three broad ways to reduce carbon emissions, all of which would have to be used by policy if stringent reductions in emissions were to be achieved: carbon pricing, the stimulation of low-carbon technological change, and the stimulation of behaviour change. This article focuses on carbon pricing, and particularly on carbon taxation, not least because carbon pricing is the only policy approach that hits all three of Stern's policy buttons: by putting a price on carbon, low-carbon innovation becomes financially more attractive and will thereby be stimulated; and high-carbon behaviour becomes relatively less affordable, which will encourage low-carbon alternative behaviours.

The relation between carbon taxation and carbon emissions trading (the two principal means of carbon pricing) is discussed further below. Staying with carbon taxation for the moment, it is clear that this is not a politically comfortable option. In fact, there is evidence to suggest that a significant increase in carbon tax rate would only be politically feasible if it were implemented on a broadly revenue-neutral basis, meaning that it is carried out explicitly as an exercise to *shift* the burden of taxation, from 'goods' such as labour, wages and profits, to 'bads' such as pollution and resource depletion, rather than to *increase* it overall. Opinion polls generally show public support for such a 'green tax shift'. For example, in the poll carried out prior to the launch of the UK Green Fiscal Commission<sup>1</sup> in November 2007, 77% of those polled expressed support for a tax shift of this kind. The rub comes from the fact that this fell to 48% support for taxes on petrol or home energy use, with 35% opposed, a level of opposition that makes such taxes politically problematic. Without them, however, there can be no substantial tax shift.

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1. See [www.greenfiscalcommission.org.uk](http://www.greenfiscalcommission.org.uk)

In a fiscal context such as the present (2009), the idea of revenue neutrality may need to be reinterpreted. Few people in the UK do not think that taxes will need to rise for some time into the future to plug the gap in the UK public finances that has opened up as a result of the economic recession and the fiscal stimulus measures that were put in place to attempt to limit its impact. The question is, what taxes should be increased? If they were carbon taxes, and if they were clearly introduced instead of other taxes (such as income taxes or National Insurance contributions), and if thereby the proportion of tax revenues from environmental taxes were to be increased, would this count as a tax shift, and would it command the public support that a tax shift in a revenue-neutral context might be expected to do (especially where the need to reduce carbon emissions was strongly accepted, which may not yet be the case)? We can be sure that the Treasury is pondering this question very seriously.

Political commitment to a tax shift would not be a new political phenomenon in the UK. In 1997 the new Labour government committed itself to a green tax shift with a forthright Statement of Intent on Environmental Taxation, and for some years pursued this intent with vigour, in its first term of office bringing in the Climate Change Levy (CCL) (actually a quasi-carbon tax, based on energy use but with a higher rate for electricity, which is more carbon-intensive, than for natural gas) and the Aggregates Levy. These both had a revenue-neutral basis whereby their revenues were matched with reductions in employers' National Insurance Contributions. Even so, the unremitting hostility of business to the CCL and the oil price increases and fuel tax protests of 2000, allied to lack of cross-party consensus on the need for environmental taxes (the Conservatives, having introduced the fuel duty escalator in 1993, denounced it in 2000), caused new Labour effectively to abandon this agenda. By 2006 environmental tax revenues (the great majority of which are energy-based) were lower than in 2000, and as a share of taxation had fallen to 7.3%, substantially lower than the 9.1% they accounted for in 1993, before green taxes featured at all on most national mainstream policy agendas.

Looking to the future, the argument is sometimes made that the policy scene has shifted, that emissions trading has now become the economic policy instrument of choice for the environment in those sectors that are most responsive to price, and that environmental impacts in other sectors are best dealt with by other policy instruments, such as regulation, voluntary agreements, information or public spending. I believe these arguments to be wrong.

First, for those sectors covered by emissions trading, there are strong arguments to underpin the young and embryonic trading schemes (the EU Emission Trading System (ETS) and the UK Carbon Reduction Commitment for large organisations) with a carbon tax. One reason is to provide a floor for the carbon price and, therefore, some safeguard for investors against the kind of excessive volatility exhibited in Phases 1 and 2 of the EU ETS. The other is that it would tax away some of the windfall gains that have been associated with the grandfathering of EU ETS permits, and allow other taxes to be lowered, i.e. it would give scope for a tax shift. As more permits were auctioned, as envisioned in the European Commission's proposals for Phase 3 of the EU ETS, the effect of a European carbon tax in parallel with the EU ETS would not be to increase the price of carbon, because this price would be set by the quantity of emissions permits in the EU ETS. Rather, it would divide the price of carbon between the carbon tax and the permit price: the higher the carbon tax, the lower would be the price of permits. Once auctioning reached 100% of permits, of course, there would be no need for both instruments, but an escalating carbon tax would be a very good way of preparing the market for this desirable state of affairs.

Similarly with the Carbon Reduction Commitment (which is already paralleled by the Climate Change Levy), raising the CCL steadily over time would not increase the overall price of carbon, but reduce the price of the CRC permits, while providing revenue to government to allow other taxes to be reduced.

Carbon or energy taxes also provide an essential foundation on which other policy instruments can build. History shows that human ingenuity in finding new uses for energy is almost limitless. All energy sources have some environmental impacts, so that some tax on energy use is always justified on environmental grounds to encourage efficient use and to curb such new uses as, for example, patio heaters (where the tax, if desired, could be levied on the product rather than the energy use), which seem a particularly inappropriate innovation in a society trying to get to grips with greenhouse gas emissions and climate change.

Thanks to the policy innovation in the UK in recent years, especially in respect of energy use, there is now quite a diversified, environmentally differentiated tax base on which to build. Greatly increasing the Vehicle Excise Duty on low-mile-per-gallon motor cars could send a powerful signal about running costs at the point of vehicle purchase, which could of course be reinforced by substantial purchase taxes for these vehicles, as are in place in a number of European countries. Higher household energy taxes would increase the information value, and the advertised financial savings, from the energy labels that are now shown on many new white goods. They would also reinforce the message, which still seems so difficult to get across, that many household energy efficiency measures actually save money over reasonable time scales.

Three arguments are routinely advanced for why it is either undesirable or impossible to use environmental taxes to achieve behaviour change or reinforce other policy instruments to the desired extent.

The first is their possible effect on competitiveness. In fact, this is a problem that arises for relatively few economic sectors: those that are both energy-intensive and exposed to intense international competition. The right policy approach here is not, because of these few sectors, to back off from environmental taxation for everyone else, but to put in place measures that will mitigate the competitiveness effects in those sectors that are particularly vulnerable. In fact, two policy approaches are currently under discussion in this regard: the global sectoral agreements, that are on the table in the context of the post-Bali climate change negotiations; and the Border

Tax Adjustments (BTAs) that have been advocated by President Sarkozy, and which were mooted as a possibility by the European Commission in its most recent proposals on how Europe should seek to reach its climate change objectives. Both policy approaches should be developed in parallel. The UK has much to contribute in this context, with its own relevant experience of the Climate Change Agreements (CCAs) associated with the CCL, and BTAs should be used to deter countries or sectors that might be disinclined to join global carbon reduction efforts but that may instead attempt to take a free ride on the efforts of everyone else.

The second argument against such taxes is their possible effects on low-income people and households. In fact, these effects only arise because of the still deplorable nature of much of the UK building stock (arguments about fuel poverty are unknown in those North European countries that have already invested in energy-efficient buildings), and this is something which needs to be comprehensively addressed if the UK is to have any chance of moving to a low-carbon economy, irrespective of other arguments. There are a whole range of institutional and financial innovations that could be brought into play to accelerate greatly the pace of change of improvement of UK household energy efficiency, starting with the homes currently lived in by poor people. A rising tax on the household use of energy would give a signal to everyone else that the longer they waited before making their homes energy efficient, the worse off they would be, and a one-stop energy-efficiency advice service (already largely in existence) should then be available to tell them what to do.

The third argument sometimes levied against environmental taxes, especially by the Treasury, is that they cannot be taken seriously as sources of revenue because, if successful at changing behaviour, they destroy their revenue base. Doubtless there are some environmental taxes of which this is true (the Irish plastic bag tax springs to mind, although even here, despite having reduced plastic bag use by 90%, the 10% residual is still a large number, and the rate at which the tax is now levied means that revenues from the tax are not insubstantial). Nonetheless, there are also environmental taxes, such as fuel duty, of which it clearly is not.

Revenues are the product of two factors: the tax rate and the quantity of consumption of the taxed product. As increases in the former change the price, the quantity consumed will fall in accordance with what economists call the price elasticity: the proportional reduction in consumption compared with the price change. If the elasticity in respect of the price is minus one, then a certain increase in the tax rate that increases the price by some proportion will reduce consumption by the same proportion, and revenues from the tax will be at least maintained. It is well established that, for most energy use and transport, price elasticities are between zero and minus one – meaning that an increase in the tax rate will change behaviour to some extent, *and* result in increased revenues. If part of a tax shift, this might be termed a win-win-win outcome for society (which gets less pollution and climate change, and fewer other environmental ‘bads’), for non-polluting taxpayers (who get reductions in other taxes), and for the Treasury, which is able to rebalance the tax base away from labour and firms, which are becoming more difficult to tax.

It might be argued that by, say, 2050, if 80% reductions in carbon emissions have taken place, revenues from a carbon tax would inevitably be reduced. This is obviously a possible issue, but there are three counter considerations. The first is that the carbon price might be such by 2050 that even 20% residual carbon emissions would yield substantial revenues; the second is that energy will remain an important input into the economy, so that revenues from energy taxes, to encourage energy efficiency, could still be substantial; the third is that 2050 is a long time away, by when it is likely that many other things relating to taxes and revenues will have changed, and speculations about that long-distant date should not inhibit policy makers from doing sensible things now.

The limited green fiscal reforms that have so far been implemented in six north European countries, including the UK, have been positively evaluated for both their environmental and economic effects. Systematic implementation of such reform through escalators – modest annual percentage increases in resource taxes and pollution charges – would give people and businesses time to adjust, but over time would transform the economy. It is not clear that the dramatic reductions in greenhouse gas emissions now being sought, and which the government is legally obliged to achieve, can be achieved in any other way.





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