



Environmental Change Institute

UNIVERSITY OF OXFORD

Stern Review Team
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To Whom It May Concern:

Members of Oxford University's Lower Carbon Futures research team (LCF) recently attended Sir Nicholas Stern's Oxonia lecture on the economics of climate change. As researchers with a keen interest in energy and climate change issues, we welcome the Review's assessment of the way in which global economic systems might affect or be affected by climate change. The consultation document and lecture highlighted three related issues which determine how economics might address climate change: the role of instruments, the need for strong institutions and collective action, and the importance of persuasion and changing preferences. This response highlights what we perceive to be key issues regarding these topics.

During the lecture, Sir Nicholas mentioned a choice between 'price' or 'quantity' based instruments. We believe that the quantity of greenhouse gas emissions is the limiting factor since pricing mechanisms have only an indirect connection with the actual emissions which govern climate change. The LCF team has recently been examining a quantity-based instrument known as personal carbon allowances (PCAs)¹. The PCA scheme is similar to the upstream 'cap and trade' of EU emissions trading scheme, but is a downstream 'cap and trade' scheme giving emission rights to the personal level. It requires setting an overall cap

¹ Fawcett, T (2005) Personal carbon allowances.
http://www.eci.ox.ac.uk/pdfdownload/energy/40house/background_doc_1.pdf

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on carbon emissions, for example, adopting the 2003 Energy White Paper's 60% carbon emission reduction target by 2050. The total carbon cap is then used to create an annual carbon budget, which allocates equal emission rights to each UK resident. Individuals are required to surrender their carbon units for any transaction directly emitting carbon (e.g. filling the petrol tank or paying a utility bill). Individuals that have not used all their carbon units at the end of the year then have the option of selling units to those exceeding their allowance or banking units to be used in future years². The result would be to create the 'pull' necessary to transform markets in favour of low carbon, energy conserving and energy efficient technologies. However there are outstanding issues regarding PCAs which may be of particular interest to economists. For example these allowances could be considered as a parallel 'carbon' currency but since future emissions (e.g. to 2050) are fixed, there is limited scope for borrowing. Given the prominence of credit mechanisms in managing personal finances today, how might a PCA scheme ensure that people successfully manage their quotas and not fall back on carbon 'credit' which would undermine the system's effectiveness?³ We therefore recommend that the Review examine PCAs as an example of a quantity-based instrument and innovative method to engage citizens in climate change and encourage changes in consumption.

Regarding institutions, we welcome the emphasis on collective action as the scale of the climate change challenge requires more than slight alterations to the status quo (e.g. simply treating greenhouse gas emissions as an externality). However fully understanding how global institutions might deliver climate change solutions must account for the political, social and ethical issues that are intertwined with the economic functionality of these bodies. For example, a decision to cap emissions based on a 550 ppm stabilisation scenario might raise questions such as: how are the remaining emissions allowances to be shared between developed and developing countries? What if stabilisation at 550 ppm creates climate impacts which exceed the adaptive capacity of a particular society (particularly in developing countries)? Who is responsible for these costs? In other words, the assumptions that underline an economic analysis of climate change are broad and should be given due consideration. Specifically this means that when internalizing political, ethical and social factors in an economic analysis, the allocation of costs and benefits must be carefully deliberated and fully transparent.

Linking the topics of institutions and changing preferences, it is clear that the Review must consider the 'do-nothing' or business-as-usual case explicitly. Institutional policies, such as

² Starkey, R, Anderson, K (2005) Domestic Tradable Quotas: a policy instrument for reducing greenhouse gas emissions from energy use. http://www.tyndall.ac.uk/research/theme2/final_reports/t3_22.pdf

³ UK Energy Research Centre workshop, Nov 3rd and 4th 2005. Taxing and trading: debating options for carbon reductions. <http://www.ukerc.ac.uk/content/view/110/57>

those of the UK government, are the result of the preferences of decision makers. If these individuals are, for example, elected every four to five years, it may be extremely difficult to persuade them of the importance of action which, although it may be unpopular in the short-term, is vital for long-term prosperity: consider for example the fuel protests in 2000 and the prime minister's recent statements on not taxing aviation⁴. During the lecture, Sir Nicholas also drew a comparison between climate change and the Commission for Africa. As the events of 2005 have shown, despite the outpouring of public support at Live 8 and through the Make Poverty History campaigns, government action on poverty has been limited (e.g. some debt relief but no review of the EU's common agricultural policy until 2013). In other words, even when there is strong public support, political systems can take time to act especially when such action is multilateral. This should not be an excuse for inaction now but rather illustrates that any economic instruments or institutions developed to address climate change will be unlikely to achieve their aims unless all stakeholders are convinced of the need for timely action. A key part of this persuasion is clearly identifying the cost of business-as-usual.

In conclusion, we welcome the Stern Review as an opportunity to ask serious questions about how climate change challenges conventional economics (particularly assumptions about growth) and how ecological limits shape our view of long-term survival and prosperity. Many of the themes identified in the consultation document are on-target, such as the importance of collective action. Encouraging participation in these multilateral processes must begin with a full assessment of the cost of inaction and although building a consensus may take time, we believe the UK should take a strong leadership role now. This could be demonstrated by introducing innovative quantity-based instruments, like PCAs, and by paying sufficient attention to the non-trivial political and ethical issues that shape the decision-making and business environments for climate change.

For more information on our research, please visit our website at <http://www.eci.ox.ac.uk/lowercf>.

Yours truly,

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⁴ 'Cutting air travel "unrealistic"', 7 February 2006, http://news.bbc.co.uk/1/hi/uk_politics/4688452.stm