

Dear Members of the Stern Review Committee

I understand that you are seeking submissions concerning your study of the economics of climate change.

I would like to do so with reference to the House of Lords' recent report on this subject and various contribution made by Nigel Lawson to this enquiry. However, I am mainly responding to your kind invitation because - I have studied the IPCC process as part of an ESRC funded research project during the early 1990s; I was a reviewer of two of the reports from Working Group III.

- I edit a journal which has published papers on energy economics related to the climate change hypothesis (or rather the reduction of carbon dioxide emissions), since the early 1990s. Indeed, how to achieve such emission reductions given the warnings of catastrophic climate change, has become a major research subject for energy policy, both from the technological and regulatory aspect.

I have reviewed, read and evaluated many papers dealing with the economics of climate change. Most recently I have published various papers and letters by Ian Castles and David Henderson, both gave evidence to the House of Lords. I am however, better acquainted with a number of IPCC critics who are concerned with IPCC methodologies and assumption on the natural science side.

On the basis of this experience I would therefore like to suggest that you take into account three matters which I consider to be of relevance to a study of the economics of climate change. I must point out, however, that I am not an economist myself. My own understanding of this subject is that it involves estimating the costs to countries and economic sectors of the many types of damage that are claimed to arise from 'global warming' caused by human actions; as well as of the costs that would arise from attempts to prevent or 'mitigate' climate change, or adapt to it. From such cost data cost-benefit balances could be constructed to aid policy-makers.

Obviously, only damage that has indeed been caused by emissions can be prevented by mitigation. This simple truth is often ignored, for while the definition of climate change used by the IPCC combines natural and anthropogenic factors causing such change, that of the UNFCCC/Kyoto Protocol only takes the latter into account. Are both changes included in the economics? Can they be if the relative contributions remains unknown?

The three matters are:

1. The close link between the economics of climate change and the natural science assumptions predicting damage.

Environmental risk and damage arising from 'global warming' depend on the degree of climatic change that is to be experienced by a particular region. Such 'predictions' are intelligent guesses made by computer models. The range of climatic change, or rather temperature rise, these models foretell

is the product of both natural science assumptions and theories (about how climate works and how and why it changes over time) and of emission scenarios. Economics and science therefore combine to achieve a doubling, or more, of the future carbon dioxide concentration in the atmosphere. Such a doubling may never happen and depends on many factors that remain poorly understood.

For both the natural sciences included in the models, and the emission scenarios, probabilities can be estimated but the uncertainties remain large, as must therefore the uncertainties in any economic cost forecasting.

To evaluate the economics of climate change without taking into account the uncertainties which prevail in the natural science assumptions and hence the large range of 'climate sensitivities' these give rise to, might lead to very unrealistic conclusions.

2. For realism, economic impact and damage cost calculations should include the benefits arising or expected from assorted 'no-regret' or 'win-win' strategies. These are now widely associated with mitigation strategies.

Such calculations would surely reduce the estimates of damage costs that might arise from higher temperatures, or hence reduce the costs of mitigation. This assumes of course that specific emission reductions or targets will indeed have predictable climatic consequences.

No regret strategies include various 'low carbon' energy policy options now clamouring for regulation and public subsidies, as well as several land-use and disposal options that claim to sequester carbon dioxide. For example, the sequestration of carbon dioxide is welcomed by oil and gas companies wishing to slow down the depletion rates of oil and gas reservoirs by such injections.

Also, benefits are said to arise from many mitigation/emission abatement policies via positive impacts on trade and technological innovation, objectives that may be sought by governments quite irrespective of any climatic impacts.

By exaggerating the damage costs associated with global warming, as tends to be done if not by the IPCC then certainly by many of its users, pressures on the public purse are increased which demand higher or new subsidies for new technologies, research agendas and markets. The 'economics of climate change' may, vis-a-vis the broader public at least, be driven opportunistically by the politics of fear.

This fear may disguise attempts to direct public resources towards new commercial activities, at least towards a reduction of the financial risks that may be associated with such activities. This is by no means illegitimate, but may require testing for its public interest dimension.

3. The global nature of the alleged warming problem and its proposed solutions therefore raises questions about the theory of first mover advantage.

Should the UK really lead the world in emission reduction in the hope that others will follow, or that we will earn income from the sale of our expertise and clean technology? Since I

feel that this hope motivates at least some of the commitment to emission abatement (or the decarbonisation of energy supply which includes emission trading with its very large transaction costs.

I hope that you will be able to examine the realism of these hopes. While some climate protection strategies may well be justifiable for energy security reasons, the subsidisation of renewables per se and possibly of a new generation of nuclear reactors, cannot, in my view, be justified on climate grounds alone.

I would be happy to explain my views in more detail and provide a list of my own publications on the subjects raised, as well as of relevant publications in 'Energy & Environment', a journal founded, by the way, by a former chief scientist of what was then called the DOE. This ministry, regretfully perhaps, did not include treasury people when it embarked on its mission of saving the planet.

Yours sincerely

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