

E.ON UK plc

Stern Review on the Economics of Climate Change Discussion Paper – 31 January 2006

1 We welcome the discussion paper and support the points set out in the Executive Summary. The global nature of climate change and the unsustainable pathway of current emissions require an international solution sustainable over long time scales.

2 We also welcome the focus of the Review on the economic aspects. A key question for the future will be how to develop the economic instruments that will encourage low carbon development while avoiding severe disruption to national economies.

3 More detailed comments on the questions posed are given below.

The science of climate change (paragraph 34)

4 The current international process via IPCC and supported by national efforts such as the Hadley Centre, is providing a sound review of the science and potential impacts. The difficulty of forecasting future emissions is exemplified by the range of global temperature rises predicted for different stabilisation levels of CO₂ but the results of variations on model runs should not be read as a description of probabilities of outcomes. The probability question is far more complex and depends not just on the science in the models but also on the actions taken in abatement and adaptation. The potential for adaptation is relatively poorly described as yet and much more work is needed in this area.

The impacts of climate change on growth and development (paragraph 68)

5 A key question on the impact of climate change is the ability of political systems and economies to adapt to climate change and to avoid or adapt to the effects. Much of the current focus is on avoidance through strategies intended to stabilise and reduce emissions of the greenhouse gases. Insufficient attention has been given to adaptation.

Taking action to mitigate climate change (paragraph 84)

6 One of the key issues is how to take a lead without simply ceding industrial competitiveness to others. The use of market mechanisms will reduce the cost of cutting emissions to a minimum but industry needs to be given a carbon price signal on a timescale that is consistent with its investment cycles.

7 UK climate change policy must deliver the largest long-term economic signal to invest in low carbon technologies through a carbon price that is consistent with maintaining the international competitiveness

of the UK economy. UK policy should focus on supporting the development of the EU emissions trading scheme as the key driver of low carbon investment and on establishing international consensus on action to tackle climate change, while recognising that this may either not be achieved or will take some time to deliver. The UK should therefore:

- give priority to making Phase 2 of the EU emissions trading scheme work well, by structuring it to avoid carbon prices which will put the future sustainability of the scheme at risk. This could be achieved through adequate 'safety valves' (e.g. banking and borrowing, ensuring effective clean development mechanisms, cash-out prices) > I should also share the burden equitably across countries and sectors; and encourage investment by providing a free allocation to new entrants on the same basis as permits are allocated to incumbents, and by allowing the transfer of allowances from dosed installations to encourage investment in new low carbon capacity;
- be prepared to use Phase 2 of the EU ETS as a vehicle to fund investment in developing technologies (e.g. through recycling of receipts from permit auctions);
- work for the earliest possible resolution of the international framework for reducing global carbon emissions to apply after the Kyoto period expires at the end of 2012 and define its relationship to and rules for Phase 3 of the EU ETS to run from 2013;
- develop in parallel an alternative climate change strategy for the UK, in the absence of sufficient international agreement, aimed at continuing to reduce emissions but minimising the impact on the UK's international competitiveness.

8 In terms of an alternative 'national' strategy, the carbon burden the UK economy could bear could be defined in relation to the mitigation costs that the UK will have to put in place to adapt to the effects of climate change (e.g. – better flood defences, improvements to regional water distribution networks...) These steps have to be taken, and therefore paid for, irrespective of what other countries do, or do not do. No one else is going to pay for the UK to be storm-proofed, so an amount of money has to be raised to tackle the effects of climate change on the UK, long-term.

9 There is therefore a case for levying some level of cost of carbon on emitters in the UK, irrespective of whether European or international schemes, such as the EUETS, persist. This minimum level of a cost of carbon, long-term, would begin to give some level of security for investments in low carbon technology etc. What is needed therefore is an estimate of what climate change might cost the UK and a commitment across parties, that these effects will be addressed

10 It is important that the market is not undermined through the introduction of long-term subsidies and further obligations to pick technology winners. Government should:

- ensure that mature low carbon technologies – such as nuclear power and mature renewable technologies such as onshore wind - are subject to an appropriate regulatory regime which supports efficient and timely delivery of investments;
- support financially the development of emerging low carbon technologies (for example, carbon capture and storage, wave/tidal power) that have the potential to play a significant role in our future generation mix. Particular demonstration requirements should be identified and companies would then propose projects and compete for funds raised from the sale of permits under Phase 2 of the EU ETS.

11 A key issue to address is the public policy case for the UK supporting emerging technologies such as carbon capture and storage given that:

- the costs whether funded by the taxpayer or the energy consumer may damage the UK's international competitiveness or inhibit the achievement of other public policy objectives;
- development of these technologies could be left to other countries such as the US or to international collaboration;
- these technologies may emerge in due course if the EU ETS proves to be an effective mechanism and provides a sufficiently strong economic incentive.

12 The Government needs to clarify its position. Generally subsidies are justified as a response to a failure by the market to deliver a desirable public benefit. In our view, the key public policy benefit in the short term is probably political, given that the UK Government has said that:

- it wants to demonstrate international leadership in responding to climate change;
- it has also set itself the challenge of putting the UK on course for reducing carbon emissions by 60% by 2050.

13 To achieve either of these objectives Government funding of demonstration projects could be justified both to demonstrate leadership in the area of technology development (which will help engage the US and support the use of these technologies by developing economies such as China) and to ensure the technologies are available to meet demanding carbon reduction targets at least cost. The Government will need to assess how much it is prepared to pay in the short term to achieve its medium term objective of effective international action and the long term benefit of reducing the impact on the UK of global warming

14 Other factors which might support UK Government subsidy would be that the UK has a particular need for these technologies on fuel diversity grounds, given that energy companies may be reluctant to invest in coal plant without CCS if carbon prices are high.

15 International funding for demonstration projects in which UK companies would participate would be an effective route for resolving the dilemma.

Dealing with uncertainty and irreversibilities (paragraph 92)

16 There are substantial uncertainties in the science of climate change, in the responses of the environment and in the will and ability of nations to tackle or adapt to the challenge. These uncertainties are compounded by the irreversibilities that may be present. The key issue however is that the fundamental risks involved are too great to ignore. The consensus of opinion is that action must be taken, the debate lies in the extent and nature of that action and rate of its application.

17 In the face of such uncertainty the usual reaction is to opt for fail-safe measures where safety lies on the side of protecting economies. In this case however more emphasis needs to be given to providing fail safe solutions for the environment and to internalise the costs of climate change. It is common practice for future benefits to be discounted but this has the effect of reducing the value of action. In the case of climate change the stock of environmental capital at risk may actually be decreasing and there may therefore be good arguments for adopting low or even zero discount rates. This will assist Governments in setting the ambitious targets for tackling climate change that are required. It will also encourage early action and that in itself will help to avoid the irreversibilities.

Creating and sustaining international collective action (paragraph 112)

18 Global action is required. That action cannot ignore either the demand of the developed world for goods and energy services or the needs of the less developed nations.

19 There should be no prescription on means. Those developed nations that choose market mechanisms to control emissions should work alongside those who prefer more technologically based solutions. The developed nations should support the less developed nations in choosing low carbon paths to economic development. The challenge lies in finding ways to link together these different approaches. Trading against targets, joint implementation and project mechanisms can all be used to achieve this.

20 Single nations can take a lead in the areas most appropriate to them. At present the EU and UK are focused on market mechanisms particularly trading but to maintain this lead longer term certainty needs to be provided by either guaranteeing continuation of trading or otherwise setting a long term price for carbon. The trading mechanisms need to be extended to allow the maximum participation of other trading systems and project mechanisms.

21 The developed nations need to recognise that the problem is largely of their making. Means must be found for using the revenues inherent in trading or project development to encourage a low carbon path and supporting the most vulnerable nations.

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