The Stern Review, UK politics and renewables – What now?

by Dr Gordon Edge, Head of Offshore

The report on the economics of climate change by Sir Nicholas Stern, head of the Treasury's economic service and former chief economist at the World Bank, was launched with much fanfare on the 30th of October. It was reported on around the world, and much lauded as a landmark in the policy debate surrounding global warming. Indeed, there has been much talk about how the landscape has now changed and that new things are possible in Stern's wake. While there is much in the report that is useful, it is important not to be carried away, however: Stern's influence will not be immediate, but it should be deep. It will be fully played out over the next few years, informing UK Government action at home and abroad over that time.

"The task is urgent. Delaying action, even by a decade or two, will take us into dangerous territory. We must not let this window of opportunity close."

Stern: What it is and what it isn't

Despite some of the reporting of the report, the climate science in Stern is not new. Mostly Sir Nicholas depends on the Intergovernmental Panel on Climate Change Third Assessment Report (IPCC TAR), published in 2001, though with some reference to more recent research on 'tipping points' – this is being reviewed for IPCC's Fourth Assessment Report, due in early 2007. Stern's job, however, was not to bring new science to the table, but to apply economic analysis to the extant evidence.

Much of the economics is not new either, for those who have followed debates on global warming for a long time, though those not familiar with the issues may be surprised by, for instance, the discussion on discounting. What is novel, however, is the upper end of Stern's assessment of the cost of unchecked climate change. With account taken of the impacts of positive climate feedbacks, Stern reckons that the likely 5°C global temperature rise that would be associated with a greenhouse gas concentration in the atmosphere of 750 parts per million of CO2 equivalent (ppm CO2e), world GDP would be reduced by 20%. This is on a par with the effects of the world wars and depressions of the first half of the 20th century.

"If we take no action to control emissions, each tonne of CO2 that we emit now is causing damage worth at least $85 – but these costs are not included when investors and consumers make decisions about how to spend their money."

Climate skeptics are likely to question these assessments, although by questioning the size of an impact, they implicitly accept that there will be one. Skeptics will also question the other side of the equation, that the cost of mitigating climate change, through moving to a low-carbon economy, will be around 1% of GDP. It is worth noting that the range of cost figures runs from as much as 3.5% of GDP down to -1%, i.e. we would be better rather than worse off at the lower end of the range. The upper end is very much a boundary, for, as the report itself states: "The models arriving at the higher cost estimates for a given stabilisation path make assumptions about technological progress that are pessimistic by historical standards and improbable given the cost reductions in low-emissions technologies likely to take place as their use is scaled up."

Stern combines these assessments of costs and benefits, along with the risks and uncertainties inherent in the issues, and concludes that the world should set an overall target for greenhouse gas concentrations in the atmosphere of 450-550ppm CO2e: below 450ppm is deemed to difficult and costly, while over 550ppm the risk of exceeding the 2°C rise that takes us into 'dangerous' climate change is deemed too high. At present global atmospheric concentrations are at 430ppm CO2e, rising by 2ppm per year. A target of 550ppm would require greenhouse gas emissions to be at least 25% lower globally by 2050; whatever final concentration target is set, greenhouse gas emissions will have to reduce to 20% of current levels eventually to keep concentrations stable.

Useful messages

Apart from the overall message that action is necessary and urgent, there is plenty of material in the report that will be helpful to the renewable energy sector. The quotes illustrating this article give a flavour of the messages that are littered throughout the report. One of the most useful sections, however, is Section 12: Opportunities and Wider Benefits from Climate Policies. This points out that: "*The shift to a low-carbon economy will also bring huge opportunities. Markets for low-carbon technologies will be worth at least $500bn, and perhaps much more, by 2050 if the world acts on the scale required.*"

Expansion of the low-carbon industries on this scale could see the number of people employed within them rise from 1.7m now to 25m in 2050, with cumulative investment in the sector of perhaps $13 trillion up to that year. But such economic development is not the only benefit. Climate change policy could also be a lever to reform energy markets and reduce the $250bn/yr governments currently spend on energy subsidies. $150bn of these subsidies are for fossil fuels, while nuclear gets $16bn and renewables and energy efficiency a mere $9bn between them.

"The carbon price should reflect the social cost of carbon and be rising with time."

Stern Review

Collateral benefits in the form of enhanced energy security and reduced expenditure on air quality improvement are also emphasised in the report. For instance, one study quoted estimates that the cost of reducing Chinese CO2 emissions by 10-20% would be more than offset by air pollution and other benefits.

Stern's impact

What is really new about the Stern report, however, is the overall synthesis of the economic evidence into a single coherent message, and, more importantly, one that has the stamp of Government approval on it. This means that it will be harder for Government to refuse demands to act when it is based on evidence within Stern. Government would not have sanctioned such a rod for its own back if it didn't think it could take it, but nonetheless it is good ammunition. But one should not underestimate the thickness of Government's skin on this issue in the short term: currently there is a severe crunch at the Treasury and very little appetite for new spending commitments. No amount of lobbying on the back of Stern will change that.

"Predictions of the costs of environmental regulations often turn out to be overestimates."

Where there is leeway to affect changes is in the raft of new initiatives that will be coming through the system in the next few years. Government has promised a Climate Change Bill in this session of Parliament, and Stern will add weight to arguments for earlier, tougher action in that debate. While the contents of the Bill are hazy, the raising of the political temperature that has resulted from David Cameron's championing of the climate cause gives rise to clear opportunities to amend the Bill in favour of low-carbon technology deployment. One such opportunity may be to give Ofgem a requirement to put sustainability on a par with consumer protection as its prime functions. This will be resisted by Government but pushed by a wide coalition within and outside Parliament.

Also in the year ahead, Government will be undertaking a Comprehensive Spending Review (CSR). This will be setting the framework for spending decisions in the period 2008-2011. Among these will be decisions on the Environmental Transformation Fund (ETF), announced recently alongside the overall limit for the UK in the second period of the EU Emission Trading System. The announcement implied that the proceeds of the allowance auctioning that will occur in the second period of the scheme would go into the ETF, though Treasury is notoriously set against such hypothecation of income streams. Such auctioning would bring in £150m/year at today's carbon prices. The CSR will tell us how much the fund will be worth and what it should be spent on when it comes into operation in 2008. BWEA will be lobbying for a significant slice of the fund to be used for emerging marine technologies, though other low-carbon lobbyists are pushing their options, notably carbon capture and storage (CCS). This technology will need significant investment to reach maturity, and is thus eyeing the ETF hungrily. CCS proponents will also be looking for a considerable part of the Energy Technology Institute's potential £1bn budget (over ten years) to be spent in their sector.

"Globally, support for energy research and development should at least double, and support for deployment of low-carbon technologies should increase up to five-fold."

The ETF, ETI and other initiatives were already in train before Stern's publication, however. The area where Stern may make the most difference, where there is something genuinely new to report, is on the international stage. Alongside the report, DTI, DEFRA and Treasury published a joint statement on Government's vision for emission trading. One of Stern's key conclusions is that there should be a single global price for carbon, to allow the cheapest options to be sought out and employed before more expensive ones. The vision statement describes international carbon trading as "the UK's carbon price instrument of choice", and goes on to set out a number of proposals for EU action and enhancing the spread of such trading. The EU should, in the UK Government's view, commit itself to reducing greenhouse gas emissions to 30% below 1990 levels by 2020 and 60% below by 2050, as well as take other measures to strengthen the ETS. Moreover, the statement sets out actions to spread trading outside the EU, to form a global market.

"The benefits of strong and early action far outweigh the economic costs of not acting."

These proposals on carbon trading are about setting the long term framework within which low-carbon technologies can thrive. They will not bear fruit for some time, but eventually they should be the prime support for renewable energy. But Stern or no Stern, there will be struggles in the short term to securing the market for our new technologies. However, BWEA is now looking forward more hopefully that these struggles will be successful. We look forward to championing your cause in the new policy environment. □

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The full report *Stern Review on the Economics of Climate Change* can be found at www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm