UK Business Council for Sustainable Energy

Memorandum to Environmental Audit Committee Inquiry:

'Keeping the Lights on: Nuclear, Renewables, and Climate Change'

Executive Summary

The UK's Energy White Paper set out a new vision for the Government's energy strategy – one that sought to put climate change at the heart of policy.

We now believe a real step change is needed both in the policy process and in the actual implementation, in order to enable the practical delivery of a low carbon economy.

The direction set by the Energy White Paper towards 2050 remains sound. The market structure, supported by an appropriate policy framework *can* 'keep the lights on' while tackling climate change at competitive costs to the consumer. What is needed is a reinvigorated policy approach on all levels: energy efficiency, renewables, CHP and market-based instruments such as emissions trading.

1. The UK Business Council for Sustainable Energy (UKBCSE) welcomes the Committee's inquiry, and the opportunity to comment on the important issues examined.

2. The Council brings together major energy businesses focused on the delivery of sustainable energy technologies and services, including renewable energy, energy efficiency and energy efficient technologies such as combined heat and power (CHP).[1] We are working to build a progressive consensus on many of the issues shaping the development of sustainable energy in the UK.

3. The focus of this inquiry is particularly welcome given the increasing realisation that climate change is one of the most challenging and serious long-term problems we face. Prior to the G8 summit, the international scientific community gave the strong message that "the scientific understanding of climate change is now sufficiently clear to justify nations taking prompt action."[2] The Council fully supports the necessity to reduce

[1] UKBCSE members are: Centrica, EDF Energy, E.ON UK, National Grid plc, RWE npower, Scottish Power, Scottish and Southern Energy, and United Utilities.
[2] 'Joint Science Academies Statement: global response to climate change', Royal Society, June 2005.

CO_2 emissions by at least 60% by 2050 if we are to genuinely tackle climate change.

4. Virtually all of the existing electricity generation plant and much of the transmission and distribution network that exists today will not exist in 2050. Existing power plants will be replaced, and transmission and distribution infrastructure for electricity and gas will be renewed and rebuilt. Within this lies the opportunity to set the UK on the path to a low-carbon future. The policy framework that Government sets, and the signals this sends, will inform the investment decisions made by Industry.

5. We believe that the priorities identified in the Government's Energy White Paper (2003) including energy efficiency, renewables, combined heat and power, and emissions trading *can* deliver the low-carbon economy anticipated. However, what is needed is consolidation and renewed vigour across all of theses policy areas if they are to deliver.

Energy Efficiency

6. As the Energy White Paper stated, "energy efficiency is likely to be the cheapest and safest way of addressing all four objectives [of the White Paper]."[3] Now, with the increasing attention on fuel prices, security of energy supply, and economic productivity, the time is right to move this agenda forward. As the numbers of household appliances increases, irrespective of their efficiency, focus also needs to also turn towards reducing energy demand. As the White Paper also stated "the cheapest, cleanest and safest way of addressing our energy policy objectives is to use less energy…reducing demand puts less pressure on energy supplies."[4]

7. The Council believes that reducing energy demand, and improving energy efficiency must remain central to the Government's energy policy. Energy is not simply a commodity to be consumed but a service that provides warmth and light. We believe there remains considerable scope for the development of commercial propositions for energy services that could provide significant opportunities for demand reduction. Similarly, new technologies such as microgeneration and smart metering could play a stronger role in reducing household energy consumption, while there remains significant potential for energy efficiency measures such as loft and cavity wall insulation.

8. The Council believes that the right incentive structure and regulatory framework could create extensive opportunities for energy efficiency and demand reduction that would address large elements of the climate change and security of supply agenda. To this end the Council has convened a working group specifically to address this and develop new thinking on taking forward the energy efficiency agenda from the point of view of the energy suppliers. However, this and other initiatives will only succeed if they are supported by a reinvigorated approach from Government.

[3] 'Energy White Paper: Our Energy Future – creating a low carbon economy', DTI, 2003
[4] 'Energy White Paper: Our Energy Future – creating a low carbon economy', DTI, 2003

Renewable Energy

9. Even in the most ambitious energy efficiency and energy reduction scenarios, electricity and heat will still need to be produced. As this memorandum highlights, much of the infrastructure for generation and transmission in 2050 has yet to be built, so there remains an important opportunity today to set the UK on a less carbon intensive trajectory to the future.

10. The Council is confident that in the future, renewable energy will play a very significant role in electricity generation. The Renewables Obligation (RO) is successfully enabling a progressive increase in investment in new renewable generation. Industry is already investing on average £700m in renewable energy per year, which is expected to rise to £1bn per annum by 2010.[5] Although this investment is most apparent with onshore wind, we can clearly see much greater generation from offshore wind in the medium-term. Similarly, investments in tidal and wave are being made that would not be getting the same support were it not for the RO.

11. We believe that the target of supplying 15% of UK electricity from renewables by 2015 is achievable. However, the broad integrity of the RO needs to be maintained, such that any changes are well focussed and used to reinforce other important Government targets such as those for energy efficiency and CHP. The Council also believes that, provided the market conditions are are right, it is quite probable that the proportion of renewables in the energy mix beyond 2015 could significantly exceed 15%, particularly as newer technologies become more cost-effective.

12. In order to ensure that renewable technologies can develop to their full potential, the Government must be focussed on removing some of the barriers that are preventing greater uptake. With offshore wind there are a number of regulatory issues with respect to transmission that need more policy focus, especially if the anticipated 4GW of generation from offshore wind is to be achieved from 2008 onwards. Similarly, microgeneration and decentralised generation face a number of planning, regulatory and policy barriers that must be addressed if they are to fully contribute to the renewable energy mix.

Combined Heat and Power (CHP)

13. Combined Heat and Power (CHP) remains the Government's unrealised low carbon technology. UK CHP use has remained at approximately 6% of total electricity supplied for the past 10 years. This is well below the EU average and compares particularly poorly with other Members States who have achieved levels as high as 40%. The scope for CHP in the UK is large: current CHP capacity is around 6 GW however Government has recognised a potential for up to five times this amount across industrial, commercial and residential applications.

[5] 'Renewable Energy', National Audit Office, 2005

14. CHP provides one of the most cost-effective carbon savings solution across all sectors of the UK economy. For many energy-users CHP is the single measure that offers the most significant opportunity to reduce energy costs and improve environmental performance. CHP, operating on over 1500 schemes across the country, already contributes significantly to the reduction of UK carbon emissions delivering savings of over 4 - 5 million tonnes of carbon annually.

15. However, despite all the benefits of CHP, the changes Government has introduced to the energy market (in particular, the introduction of NETA in 2001) has caused the virtual collapse of the CHP industry over the past five years. The most important component in achieving the Government's 2010 10GWe CHP target, industrial CHP projects, is at a standstill.

16. The Council believes that the Government must radically rethink current policies towards CHP and reinvigorate its support for this proven, cost-effective and clean technology in order to not only help industry to reduce energy costs, but also to meet its security of supply and climate change ambitions.

Market-based Mechanisms

17. An ambitious energy efficiency and energy reduction strategy, continued support to renewables, and reinvigorated policies for CHP would dramatically reduce carbon emissions, bolster security of supply, and potentially offer reduced energy costs. In the context of progress in these policy areas, the need for new generation capacity will become more apparent. In this case, Council believes that the competitive market is best placed to deliver that new generating capacity.

18. The market is can be an efficient means of delivering of secure, sustainable and affordable energy to consumers. Government then needs to reinforce this with appropriate policy interventions. The Council would endorse the comments made by the Energy Minister Malcolm Wicks MP on 25 May 2005, that: "*we do not believe Government is best equipped to decide the composition of the fuel mix. We prefer to create a market framework, reinforced by long-term policy measures (such as the Renewables Obligation) which will give investors, business and consumers the right incentives to find the balance that will most effectively meet our overall goals*."[6]

19. A number of significant uncertainties still surround nuclear generation that go some way towards explaining why the market has not decided to invest in new nuclear generation capacity. These include public acceptability; AGR life-extension; nuclear licensing; access to existing nuclear sites; planning, decommissioning and longer term waste management. An energy review may choose to address some of these, along with considering new measures to revitalise delivery of the Governments CHP target, strengthened action on energy efficiency, and, as appropriate addressing barriers to new investment in microgeneration and offshore wind. All of this

[6] http://www.dti.gov.uk/ministers/speeches/wicks250505.html

will enable players in the market to make a wider range of investment choices.

20. In order to achieve agreed policy objectives, such as the reduction of carbon emissions, enhanced security of supply and so on, we welcome the role of policy instruments that are compatible with the competitive market. There are a range of policies being used to send signals to the energy industry in order to influence investment decisions such as the Renewables Obligation. Also, most notably, the EU Emissions Trading Scheme (EU ETS) set up this year has now put a price on carbon. The likely future cost of carbon is now a key factor in investment decisions in new power generation, and the Council welcomes and supports the EU ETS for sending a significant signal to Industry that has the potential to influence future investment decisions.

21. However, beyond 2012 there is a policy vacuum regarding the EU ETS. A decision to invest in new generating capacity is based on an investment lifetime of 20-30 years. Therefore, before investment decisions are made, investors need to be reasonably confident in the long-term stability of the policy framework in which they operate. In order to be fully effective, and to truly internalise the cost of carbon, the Government needs to provide some certainty as to the long-term future of the EU ETS. We also believe there is merit, in a long-term, science-based, EU-wide cap, which would ensure that overall emissions from regulated sectors are reduced on an agreed and appropriate trajectory.

The Institutional Framework

22. The Council believes that the Government's approach set out in the Energy White Paper, ensuring customers receive secure, affordable and sustainable energy through a competitive market can deliver the necessary carbon reductions to 2050. We fully support these objectives and the direction set out in the Energy White Paper. What are needed, however, are bolder and more ambitious policies to reinvigorate that approach. We believe one impediment to delivery lies in the current institutional arrangements.

23. The split of energy responsibilities between DTI and DEFRA, the additional roles of ODPM, HM Treasury, and within the broader climate change agenda, the Department for Transport, gives the impression of fragmentation at a political and consequently policy level. We welcome the recently created Cabinet Committee on Energy and the Environment as a step towards delivering this leadership and trust that the new focus will bring with it a unity of purpose across Government departments and their delivery agencies.

24. However, we believe there still remains scope for new thinking on the institutional framework. We note that the Government's Performance and Innovation Unit Energy Review (2002) proposed that for the long-term the Government should look to bring together responsibilities for energy, transport and climate change policy in one department.[7]

[7] 'The Energy Review', PIU, 2002

25. In Australia, the institutional structure for policy making is broadly similar to the UK, and energy policy is largely a matter for the States. Both New South Wales and Victoria have evolved some innovative arrangements for policy creation and delivery. In the early 1990's the New South Wales Government created the statutory Sustainable Energy Development Authority. In 2004 this was merged into a new Government Department to create the Department of Energy, Utilities and Sustainability with its own Cabinet level Minister. In Victoria, the statutory Sustainable Energy Authority Victoria (SEAV) was created from two predecessor bodies in the mid-1990's. With its own Board, it reports to the Deputy Premier and Minister for Sustainability and Environment as well as the Energy Minster. It has an explicit policy role and delivers a range of programme activity concerning energy efficiency, renewable and CHP as well as fuel poverty. With both SEDA (as was) and SEAV, traditional departments have found their policy role occasionally tense, but Ministers have welcomed the focused policy interventions it gives them.

Conclusion

26. The market structure, supported by an appropriate policy framework can 'keep the lights on' while tackling climate change at competitive costs to the consumer. What is needed is a reinvigorated policy approach on all levels: energy efficiency, renewables, CHP and market-based instruments such as emissions trading. The UK's Energy White Paper set out the Government's vision, putting climate change at the heart of the energy debate. We now believe a step change is needed in actual policy drive and implementation, to enable the practical delivery of a low carbon economy.

UKBCSE

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