

DINNER/DISCUSSION SUMMARY**The Energy White Paper**Held at The Royal Society on 20th June 2007

We are grateful to
Carron Energy, The Institution of Engineering & Technology
and The Institute of Physics for supporting this meeting

Chair: **The Earl of Selborne KBE FRS**
Chairman, The Foundation for Science and Technology

Speakers: **Willy Rickett**
Director General, Energy Group, Department for Trade and Industry
Barry Neville
Director of Public Affairs and European Policy, Centrica
John Miles
Chairman, Global Consulting, ARUP

Mr RICKETT described the main elements in the Energy White Paper. It was sometimes asked why such a paper was necessary. His reply was that energy policy had taken on new dimensions: there were the global aspects (the G8+5 meeting, work on Kyoto 2 and rising world demand for energy), the European aspects (current negotiations within the EU), the national aspects (security of supply, the continuing rise in British carbon emissions, the fluctuations in oil and gas prices), and the host of issues connected with climate change, including the Bill now before Parliament and Sir Nicholas Stern's review of the economic implications. There were two obvious objectives. The first was to establish reliable and competitive prices within a framework of security of supply, increasing investment to meet rising demand, diversification of supply, greater energy efficiency and a framework of regulation and planning for emergencies. The second was to establish sustainable energy, having regard to climate change and its many implications. Here Sir Nicholas Stern's work in pointing out market failures was particularly important. We needed to work for an effective carbon market, improve efficiency, and develop low carbon technologies, and reduce fuel poverty.

The White Paper was also a planning document. The problem was how to put future policies into effect. We needed new European as well as global policies. We needed to improve the current regulation system and reform planning so as to give more weight to long term strategy. We needed to establish a price mechanism for carbon through Carbon Capture and Storage after 2012, to fix the right targets, both EU and British, and to improve the EU emissions trading system and renewables obligation. For new low carbon technologies, he welcomed the new Energy Technology Institute and the Environmental Transformation Fund. We needed to look at the role of nuclear energy. We needed to look into greater energy efficiency, and set incentives and regulations for the purpose: these should include building as well as transport systems. We needed to give advice to households, with matching energy certificates, to show individuals what could be achieved. Finally, we needed to meet current

government targets, in particular a 60% reduction in carbon emissions by 2050. There was a busy time ahead.

MR NEVILLE described the role of Centrica in Britain, Europe and even the United States. He referred to the Prime Minister's direct interest in the subject, and the vital importance of achieving security of supply, coping with climate change, and recognizing the vulnerability of customers. Markets had to operate within a policy framework, but it was necessary to decide whether the Energy White Paper was more market or government oriented (was it a Gosplan relabelled Greenplan?). There was a complex of difficult issues including the ways in which governments used such fiscal instruments as the Climate Change levy, corporation tax, VAT, and the renewables obligation. The pricing of carbon was critical. Then there were all the issues connected with regulation. At present there was a welter of institutions involved in energy policy, ranging from the European Council, the European Commission and the European Parliament, to such government departments as the DTI, DEFRA, the Treasury, the FCO, No 10 in its various aspects, and those responsible for local government and pensions. Then there were such official agencies as the Environment Agency, the Carbon Trust, the National Consumer Council, the Office for Climate Change, the Fuel Poverty Action Group, and in future a Planning Commission. No wonder it was hard to make sense of it all.

He drew particular attention to the need for security of supply, with diminishing North Sea resources of oil and gas, and illustrated the variety of world energy resources around the EU. So far markets had developed well with good diversity, but it was vital to establish a price for carbon. Then there was a variety of energy saving devices in prospect. The White Paper had given a good start in tackling this immense range of problems. Now new policies had to be adopted and put into effect as a matter of urgency if targets were to be met.

Mr MILES said that the strength of ARUP was in design: whether cities, business mechanisms, cars, or other products. Above all it was necessary to put policies together,

and recognize the different patterns of energy consumption, with accompanying curves in carbon emissions worldwide. Today he wanted to focus on two main points: transport and buildings, where ARUP had special experience.

On transport most emissions came from vehicles which were increasing in number and were becoming longer lasting. There was a particular need for technological improvement: in rough terms manufacturing caused 10 per cent of vehicle emissions, their use 85 per cent, and their disposal 5 per cent. In looking ahead, we wanted lighter weight vehicles of more compact design, use of alternative fuels, lighter batteries and so on. But here the law of unintended consequences often applied. For example greater use of biofuels could damage forests, occupy land to the detriment of other activities, and restrict food supplies. Governments had to use fiscal instruments, including subsidy where necessary, to secure the right results.

On buildings he said that the aim for the future should be zero carbon emissions. There were many possibilities involving redesign, insulation, community heating systems, use of waste materials and so on. A problem was often whether to refurbish existing structures or to replace them. Replacement was usually easier. Costs were likely to be large, and the public would need to be persuaded. People were guided more by their pockets than by their ideals.

In conclusion he said that all the relevant factors had to be brought together. ARUP was involved in the design and structure of the eco-city Dongtan in China, and comparable eco towns and communities were being built elsewhere. In the meantime he had some practical suggestions, which might not find universal favour. One way of saving vehicle emissions would be to fix speed limits at 60 mph and to build outside lanes for high speed buses. The Mayor of London had shown what could be done with the congestion charge, and car manufacturers were now thinking about building more economic vehicles. For buildings government intervention was essential to fix fiscal incentives and to establish proper costing. In this regard free market mechanisms simply did not work.

In discussion, the following points were made:

- There was a tricky balance between government regulation and market forces. Integration of the many factors involved, going beyond energy on its own, was essential.
- There was a clear need to establish a price for carbon.
- After discussion of the suggestion that future building capacity should be emission free, it was argued that with exceptions it would be difficult to regulate. It would be better to go for carbon trading, and Carbon Capture and Storage.
- For poor countries seeking to improve their living conditions with rising energy demand, the right balance between government intervention, whether by local governments or through aid from outside, or by reliance on market forces was hard to establish.
- Government fiscal policies in promoting or taxing use of North Sea resources seemed at times inconsistent, and should be established on a long term basis.
- Doubt was expressed about the confidence limits for the estimates of carbon emissions in the White Paper. In response it was argued that these figures were subject to variation, and the White Paper was designed mainly to lay out the broad directions of policy. Future levels of carbon emissions might breach what we now believed likely. Things could be worse than expected and we should prepare for them.

- It was hard to fix priorities when it came to judging resource depletion against the effects of climate change. A futures market in carbon had already been established to 2012 which could show how traders viewed the future policy on carbon reduction.

- The problem of persuading individuals, and if needs be changing behaviour patterns to go for the policies outlined in the White Paper, was recognized. People liked green policies until they had to pay for them. A discussion followed on the degree to which policies should be local as well as national. The more local authorities could be empowered the better. One suggestion was that as people hated Council tax, perhaps an offer to reduce it might be associated with reduction of carbon emissions.

- To the argument that the DTI was too British-centric, it was argued that Britain cooperated closely with its European partners, and generally gave leadership (as seen at the recent G8+5 meeting). On climate change we had long been leaders.

- On housing costs arising from new regulations, some form of government intervention in the form of subsidies might be necessary.

- On resort to nuclear energy views on the subject were currently changing. Sometimes the electoral cycle was too short for sensible long term policies to be adopted. Nuclear policy was now under renewed debate, including the prospects for fusion technology.

- At present there was a convergence between the three main political parties on the environment. This underlined the need for a long term view to be taken which would bring all the factors into play. A particular difficulty was how to reconcile development in poor countries with the need for a low carbon world economy.

- In the longer term Carbon Capture and Storage (CCS) would not be possible without government direction and help. We had to build the right institutions to reduce many of the prevailing uncertainties.

In summing up the Earl of Selborne as Chairman said that perhaps the most essential message was the need for us all, sooner rather than later, to change the way we live. This would not be easy in a society which thought more of saving wallets than the planet. The present meeting had been a useful contribution to the public debate.

Sir Crispin Tickell GCMG KCVO

The presentations are on the Foundation website.

Useful web links:

Arup:

www.arup.com

Carron Energy:

www.carronenergy.com

Centrica:

www.centrica.co.uk

Energy White Paper:

www.dti.gov/energy/whitepaper/page39534.html

Policy Studies Institute (PSI):

www.psi.org.uk

The Foundation for Science and Technology

www.foundation.org.uk

The Institution of Engineering and Technology:

www.theiet.org

The Institute of Physics:

www.iop.org

UKERC:

www.ukerc.ac.uk

King/Stern Review of Low Carbon Transport:

[www.hm-](http://www.hm-treasury.gov.uk/media/F/C/king_callforevidence110607.pdf)

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