Liberal Democrat Debate on Civil Nuclear Power – 17 January 2006 7-10pm

Key brief and Q&A

Contents

Nuclear energy policy

What is the UK's policy on nuclear?

- The Energy White Paper made it clear that the Government's priority is to strengthen the contribution that energy efficiency and renewable energy sources make towards meeting our carbon commitment. It recognised that nuclear power is currently an important source of carbon free electricity, but also recognised that there were issues concerning economics and waste that made a proposal from industry for new build unlikely at the moment.
- As we have said, before any decision were taken to proceed with the building of new nuclear power stations there would need to be the fullest public consultation and the publication of a further White Paper setting out our proposals.
- The Government is committed to ensuring that the country continues to sustain its existing nuclear power stations, which will be running into the 2020s and, in the case of Sizewell B, beyond; and deal with historic liabilities.

Who would propose the building of any new nuclear power stations?

- The initiative for bringing forward proposals to construct new plant lies with the market. A generator wishing to build a new nuclear station in the UK would be subject to a number of approvals processes under EU and UK legislation.

What has been done to keep open the nuclear option?

- We have been maintaining nuclear skills and research in the industry. Examples include -
    - Cogent Sector Skills Council was launched in March 2004 tasked with taking a strategic view of nuclear sector to ensure that education and training can meet the nuclear employers' current and future needs.

- Opportunities for fission research have been announced as part of the Research Councils "Towards a Sustainable Energy Economy" initiative. Up to £6 million is being made available over four years.
- UK is continuing to participate in the development of the next generation of reactors through the Generation IV International Forum (GIF) international research programme. DTI funding of £5 million a year has been set aside.

What percentage of electricity supplied in the UK comes from nuclear generation?

Electricity supplied from nuclear power generation currently accounts for just under 20% of the UK's supplied electricity.

Is it the case that Mrs Beckett has blocked consideration of nuclear?

- No. There is a policy, set out in the Energy White Paper, to keep open the option of nuclear new build. Nuclear was not ruled out. But we said clearly that before any decision to proceed *"there will need to be the fullest public consultation and the publication of a further White Paper setting out our proposals"*. That remains the position.

ENERGY REVIEW - NUCLEAR (GENERAL)

What role will nuclear energy play in the future?
No decision has been taken on the need for new nuclear power stations – this is a genuine energy review and we are examining all the options to help the UK to meet its medium and long-term energy goals. Given the recent media attention, I would like to emphasize that the Government goes into this Review neutral on nuclear – we have by no means taken **any** decisions at this point.

Would the government be prepared to guarantee the price of carbon in order to give potential owners of new nuclear power stations certainty about a key element in the comparison of nuclear and other generation costs?
No decision has been taken on the need for new nuclear plant, so it is premature to answer such a question. However, the Review will be looking at whether further Government measures would be justified, within our market framework to help the UK meet its longer-term energy white paper goals.

Will the Minister guarantee that no public subsidy will be made available for nuclear new build?
No decision has been taken on the need for new nuclear plant, so it is premature to answer a question on subsidising. However, I can say that the Government remains committed to a market-based approach. Moreover, the Review will be taken forward in the context of the Government's commitment to sound public finances.

Could British Energy play a part in any new nuclear programme?
Any future power station, nuclear, or otherwise would be built and run by the private sector. Whether British Energy choose to involve themselves in any proposals for new power stations is not a decision for Government.

Can you rule out consumers having to pay more to enable nuclear to go ahead (as they are now with renewables)?
No decision has been taken on the need for new nuclear plant, so it is premature to answer such a question. However, I can say that the Government remains committed to a market-based approach – it is for individual companies to set their own energy prices and not for the Government.

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ENERGY REVIEW – NUCLEAR AND RENEWABLES

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Cost and timescales of new nuclear plants

Predicted construction costs?

The Energy Review will of course look at the costs nuclear along with the other technologies within the energy sector.

The predicted final cost of building the new [Framatome EPR 1600 Mwe] reactor in Finland is 1.75 – 2.5 billion EUR. Equating to around £1.2 - £1.7 Billion.

Building timescales?

Construction of the Finnish EPR started in 2005 and is expected to become operational in 2009.

In Asia construction times have tended to be around four years. For example the new-generation 1300 MWe Japanese reactors which began operating in 1996 and 1997 were built in a little over four years.

How long would it take to build a new nuclear plant in the UK?

This will need to be looked at as part of the consideration of nuclear in the Energy Review. The only previous nuclear build in the UK was under state ownership. The most recent example is Sizewell B, which started commercial operation 7 years after construction commenced.

Nuclear power stations lifetime extensions

Are nuclear operators proposing to extend the lives of their nuclear reactors?

- The decision to apply for an extension of the lifetime of nuclear plants is a decision for the operators.
- In the case of British Energy, the company recently announced a 10 year lifetime extension for Dungeness B Power Station. It will be for British Energy to consider the options for lifetime extensions for its other plants.

If pressed for Government's view and role:

- The Nuclear Decommissioning Authority (NDA) completed a thorough review of British Energy's request for an extension of the Scheduled Closure Date for Dungeness B Power Station for a period of up to 10 years (i.e. up to March 2018). The NDA concluded that the economic benefit of a lifetime extension outweighed any additional decommissioning costs and as such, under the terms of the Nuclear Liabilities Funding Agreement (NLFA), their approval was automatic.
- In the case of further extensions, applications for a lifetime extension will be treated on their individual merits. Under the Nuclear Liabilities Funding Agreement (NLFA) BE is required to obtain the consent of the NDA to extend the

life of its nuclear power stations beyond their current scheduled closure dates. The purpose is to ensure that the 'benefit' to the DTI of the proposed extension will offset any increase in the costs of decommissioning and uncontracted liabilities. The 'benefit' is a defined term in the NLFA and is essentially an assessment of the benefit accrued from the discounting effect of a lifetime extension upon the Nuclear Liabilities Fund (BE's segregated fund).

- If the NDA is satisfied that the economic benefit would offset the additional liabilities then NDA **must** approve the change. If the liabilities do outweigh the benefit then the NDA will make a recommendation to the Government and Ministers will take the final decision. In such an event approval (or not) will be based on wider considerations, including national strategic grounds.

BNFL stations

There are no proposals on the table to extend the lives of any of the BNFL managed stations. The NDA have set out their proposals for the lifecycle of the Magnox fleet of power stations (operated on their behalf by BNFL) in their first Strategy.

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Nuclear waste

What is happening about the disposal of nuclear waste?

- Options for the long-term management of higher activity wastes are currently the subject of consideration and evaluation by the independent Committee on Radioactive Waste Management (CoRWM). CoRWM are due to make their final recommendations to Government in July 2006. The long-term management policy for these higher activity wastes will then be decided by UK Government and the devolved administrations in the light of CoRWM's recommendations.
- The process of selecting a site or sites for whatever facility is ultimately chosen for dealing with these wastes will be undertaken in a similarly open and transparent manner as the work of CoRWM, with opportunities for the public to be involved and to influence the decisions directly.

The Drigg facility in West Cumbria is the only site in the UK licensed for the disposal of low-level waste (LLW). LLW is transported there by rail and road in purpose designed and licensed containers for disposal in the engineered vaults at Drigg.

THE COST OF CIVIL NUCLEAR CLEAN UP

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Relationship of Clean Up to New Build

So It Does Relate to New Build?

- The cost of dealing with the historic legacy has **no** bearing at all on the costs of decommissioning any future nuclear reactors in the UK.
- The historic nuclear legacy will need to be dealt with irrespective of whatever decision is taken on new nuclear power for the future. Not to meet them would be against the national interest in terms of safety, security and the environment.
- The cost of dealing with the legacy **cannot** be taken as a benchmark for the possible future costs of decommissioning new reactors. The legacy is made up of experimental facilities created 30 and 40 years ago and without any consideration at the time for future decommissioning and clean up.
- Important to register that some 80% of the total costs relate to Sellafield and Dounreay – nether of which ever produced much electricity.
- Unlike the facilities of earlier generations, the costs of decommissioning of modern nuclear reactors would be built in from day one.
- Makes no sense at all to argue before the work has been done that the costs of a new generation of nuclear power stations are too high.

What About British Energy's Liabilities? Who Pays for That?

- The government has assumed responsibility for BE's historic spent fuel liabilities under contract with BNFL (BE is responsible for meeting the costs of its future spent fuel liabilities). The value of this undertaking totalled £2.4bn at July 2004 (latest figures provided to the EU) and reflects fixed pricing for storage and reprocessing of Advanced Gas Reactor Fuel, based on tonnage of fuel delivered.
- In addition the government has agreed to underwrite the costs of decommissioning British Energy's nuclear power stations and the discharge of certain uncontracted nuclear liabilities (some of these are future costs) to the extent that the assets of BE's segregated fund falls short. The decommissioning and uncontracted liability costs were valued at £2bn (July 2004) and are based on BE's latest estimates. It is accepted that these costs are subject to uncertainty and BE is currently updating its estimates.
- The NDA has been charged with oversight of BE's decommissioning and uncontracted liabilities in order to minimise any requirement on government top-up funding. BE are in the process of reassessing these costs and they will be reviewed and challenged by the NDA when data is available.

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ANNEX 1

Recent PQs asked by Norman Baker

December 2005

Question. To ask the Secretary of State for Trade and Industry, how much public money has been earmarked for investment in future nuclear fission development; and how much of that money is expected to be spent on the Generation IV Scheme.

Answer. DTI has allocated £10 million, £5 million in 2006/7 and £5 million in 2007/8, to support UK involvement in international research on advanced nuclear energy systems. Much of this is expected to fund UK research on Generation IV systems for potential international deployment from around 2030; the exact amount will depend on the mix of research proposals that are submitted. The initiative will support UK skills needed to keep open the nuclear energy option and our capability to keep abreast of international developments and inform UK policy development.

The Research Councils have allocated £6m to a consortium for research to "Keep the Nuclear Option Open" which commenced in October 2005 for four years (of which a small element of will focus on Generation IV technologies). EPSRC intends to award up to £5m to support an Engineering Doctorate Centre in Nuclear Skills, which will have a first intake of students in Autumn 2006, and in May 2005 awarded £1m for a masters level training package - the Nuclear Technology Education Consortium (NTEC).

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Question. To ask the Secretary of State for Trade and Industry, what assessment he has made of the lifecycle carbon emissions of a nuclear fission plant; and if he will make a statement.

Answer. The Department has undertaken no assessment of the lifecycle carbon emissions of a nuclear fission plant.

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Question. To ask the Secretary of State for Trade and Industry, what the latest estimate is at 2005 prices of the total costs of construction for UK civil nuclear reactor facilities, broken down by the costs of (a) planning, (b) research, (c) physical construction of reactors and associated nuclear facilities, (d) prototype reactors, (e) licensing reactor designs, (f) construction site preparation and (g) construction site purchase.

Answer. The Government has not made its own estimates for the construction of nuclear power facilities. Proposals for new nuclear build are a matter for the private sector. However, we are aware of estimates of new nuclear build costs by organisations such as the Royal Academy of Engineering, Massachusetts Institute of Technology (MIT) and the University of Chicago.

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