NEW NUCLEAR BUILD: IMPLICATIONS FOR NUCLEAR LEGACY MANAGEMENT

NuLeAF
NUCLEAR LEGACY ADVISORY FORUM

Briefing Paper 1
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Introduction

It is not within NuLeAF's remit to form a view on whether new nuclear power stations should be built, but it does have responsibility to comment on any implications for nuclear legacy management. For this reason, the Briefing Paper focusses on relevant questions in the Government's current consultation on nuclear power and suggests ways in which the interactions between any new build and legacy management should be handled.

NuLeAF's member authorities are invited to comment on these suggestions, prior to preparation of a formal NuLeAF response to the consultation.

The Briefing Paper introduces:

- the Government White Paper and Consultation Process
- the potential implications for nuclear legacy management
- the consultation questions relevant to legacy management
- the proposed NuLeAF responses.

On 23 May 2007, the Government published its White Paper 'Meeting the Energy Challenge', which sets out goals for energy policy covering carbon dioxide targets, the reliability of energy supply, energy markets, and domestic heating[1].

At the same time, the Government published a consultation document (CD) 'The Future of Nuclear Power' and a number of supporting documents[2]. The closing date for comments is 10 October.

The CD explains that:

[1] www.dti.gov.uk/energy/whitepaper/page39534.html
[2] www.dti.gov.uk/energy/whitepaper/consultations/nuclearpower2007/page39554.html

- Any new nuclear station would be proposed, developed, constructed and operated by the private sector.
- The private sector would be expected to meet decommissioning and long term radioactive waste management costs.
- The government will engage with industry and other experts to develop arrangements for managing the costs of decommissioning and long term waste management.
- Potentially suitable sites for new nuclear power stations have been identified with an emphasis on "recycling" sites that have previously had nuclear power stations on them.
- Proposals for new nuclear power stations would come within the changes proposed to the Planning system regarding large national infrastructure projects[3].

The Potential Implications for Nuclear Legacy Management

The CD contains a chapter on waste and decommissioning that seeks to explore the practical issues surrounding the impact that any new nuclear power stations would have on current plans for waste management. It also addresses the ethical issues that new waste creation raises, and puts forward a view on how those ethical issues should be addressed in the overall appraisal of the pros and cons of new nuclear power stations.

The CD makes it clear that new nuclear build could impact on nuclear legacy management in a number of ways, including strategies for the interim and long term management of radioactive waste, and for decommissioning.

The potential implications include:

- the requirements for the number and location of interim storage facilities, particularly for Intermediate Level Waste and spent fuel;
- requirements for the number, location and capacity of Low Level Waste disposal facilities, either at existing nuclear sites, or new regional or national disposal facilities[4];
- impact on site end states or the time period within which the end state might be reached; and
- the impact on the inventory of wastes for emplacement in a geological repository[5], and implications for repository size and cost.

[3] Planning for a Sustainable Future http://www.communities.gov.uk/planningwhitepaper

[4] 'Management of Low Level Wastes', NuLeAF Policy Statement 4, July 2007.

[5] 'Geological Disposal', NuLeAF Policy Statement 3, January 2007.

Consultation Questions Relevant to Nuclear Legacy Management

The CD sets out a series of statements about the Government's views, followed by consultation questions. In the light of NuLeAF's remit, the views and questions of most relevance are:

Waste and Decommissioning

Government view: The Government believes that new waste could technically be disposed of in a geological repository and that this would be the best solution for managing wastes from any new nuclear power stations. The Government considers that waste should be stored in safe and secure interim storage facilities prior to a geological repository becoming available.

Question 8: Do agree or disagree with the Government's views on waste and decommissioning? What are your reasons? Are there any significant considerations that you believe are missing? If so, what are they?

Co-Disposal of Wastes

Government view: The Government considers that it would be desirable to dispose of both new and legacy waste in the same repository facilities and that this should be explored through the Managing Radioactive Wastes Safely process.

Question 9: What are the implications for the management of existing nuclear waste of taking a decision to allow energy companies to build new nuclear power stations?

Reprocessing of Spent Fuel

Government view: the Government has concluded that any nuclear power stations that might be built in the UK should proceed on the basis that spent fuel will not be reprocessed and that accordingly waste management plans and financing should proceed on that basis.

Question 14: Do you agree or disagree with the Government's views on reprocessing? What are your reasons? Are there any significant considerations that you believe are missing? If so, what are they?

Proposed NuLeAF Responses

In the light of the range of potential impacts on nuclear legacy management, the NuLeAF Steering Group has proposed the responses outlined below.

Question 8: Waste and Decommissioning

The Government's current views are insufficiently clear about how the interactions between any new nuclear build and legacy management should be handled. It is proposed that the following requirements should be adopted as Government policy:

- in developing proposals for new build at specific sites, the developer should ensure that it identifies the requirements for on and off-site facilities for radioactive waste management and decommissioning, and the implications for existing, planned or anticipated facilities for managing the nuclear legacy on or adjacent to the site concerned and for any regional or national facilities;
- the developer should ensure that it briefs the local planning authority and Site Stakeholder Group on those requirements and implications at the reapplication stage, and through subsequent applications steps;
- the developer should brief the NDA on those requirements and implications at the earlier opportunity;
- the developer should publish the above information;
- in liaison with the NDA, and taking into account the views of local authorities and the communities they represent, the developer must ensure that its proposals for radioactive waste management and decommissioning do not
- prejudice effective management of the nuclear legacy; and
- steps will be taken to ensure that the recruitment of staff into any new build programme does not leave nuclear legacy management short of staff and skills.

Question 9: Co-Disposal of Wastes

Local authorities that may wish to consider participation in the repository siting process will be concerned about the possibility of future changes to the amounts and types of waste being considered for emplacement within a repository.

The NuLeAF Steering Group supports CoRWM's recommendation that any substantive increase to the radioactive waste inventory for geological disposal will require an additional step in the negotiation process with host communities to allow them to take a decision to accept of reject any additional waste.

Although the CD makes a welcome reference to "open and transparent discussions with any volunteer host communities over the final inventory of wastes and materials that may ultimately be proposed for inclusion" (para 8.28), adoption of the CoRWM recommendation would provide the necessary level of re-assurance.

Question 14: Reprocessing of Spent Fuel

Spent fuel may either be stored and disposed of, or reprocessed to separate out uranium and plutonium that could in principle be re-used. The Government points out that reprocessing raises concerns about the separation of plutonium which would require long-term storage, the management of associated waste streams (including the storage and vitrification of highly active liquid, and regulated discharges to the Irish Sea), and the transport of spent fuel. The proposal not to reprocess spent fuel from any new build programme means that the spent fuel would have to be stored prior to disposal in a repository.

The NuLeAF Steering Group has not taken a view on the Government proposal and recognises that a range of views is likely to exist amongst member authorities. Member authorities are invited to comment on whether NuLeAF should submit a response to this question and, if so, what it should be.