House of Commons

Trade and Industry Committee

The Work of the NDA and UKAEA: Government Response to the Committee's Sixth Report of Session 2005-06

Sixteenth Special Report of Session 2004–05

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The Trade and Industry Committee

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The current staff of the Committee are Elizabeth Flood (Clerk), Glenn McKee (Second Clerk), David Slater (Second Clerk), Robert Cope (Committee Specialist), Grahame Allen (Inquiry Manager), Clare Genis (Committee Assistant), Jim Hudson (Senior Office Clerk) and Joanne Larcombe (Secretary).

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Sixteenth Special Report

The Committee published its Sixth Report of Session 2005–06[1] on 16 August 2006. The Government's response was received on 23 October 2006 and is published as an Appendix to this Report.

Government response

We welcome the Committee's continued interest in the nuclear decommissioning and clean up field and the very positive comments on the role of the UKAEA.

The Nuclear Decommissioning Authority (NDA): response to Recommendations 1, 2 and 5 (on skills).

We note the Committee's concern about the lack of clarity in the estimates of the total cost of the UK's civil, public nuclear decommissioning and clean up programme, the fact each successive estimate has been higher than its predecessors, and that the final cost of cleaning up the UK's historic nuclear legacy is not yet known.

A key task for the Nuclear Decommissioning Authority (NDA) when it assumed responsibility for the management of the historic nuclear legacy (1 April 2005) was to determine the final cost of the historic legacy. The NDA are undertaking this task by means of a management 'tool' known as the Life Time Plan (LTP) process. (This was previously known as the Life Cycle Baseline (LCBL) process). The LTP system replaces the earlier varying systems, which the nuclear operators (BNFL, and UKAEA) used prior to the setting up of the NDA.

The NDA's LTP process, which is carried out annually, sets out the complete range of activities that will need to be undertaken at each of the NDA's sites to bring them to their defined end states. This is a 'cradle to grave' analysis of the total undiscounted cost of the NDA's mission—including running its commercial operations. The NDA is committed to continuous improvement of the LTP system and is able to respond flexibly to new information and any significant programme changes should they occur at sites. The LTP is a powerful tool for analysing costs. The data from individual sites is combined to provide a national figure for the historic liability.

The NDA are working to achieving a definitive estimate of the historic liability in FY 2008/09. In the meanwhile, the government cannot speculate on what the final figure might be but we can assure the Committee that the final figure will be the product of careful analysis.

Ministers have consistently stated that with better measurement the expectation was that the total undiscounted cost of the NDA would be likely to rise in the short term. In the longer term the expectation is that the total cost will be driven down through increased

1 Sixth Report from the Trade and Industry Committee, Session 2005-06, *The Work of the NDA and UKAEA*, printed as HC 1028 on 16 August 2006.

innovation and efficiencies driven by the NDA through the competitive process for site clean up programmes.

Current estimates of the historic liability are a significant improvement on historic estimates. As the Committee is aware the legacy comprises a number of disparate items:

— nuclear sites and facilities operated by UKAEA and BNFL developed in 1940s, 1950s, and 1960s as well as the wastes & spent fuels produced;

— the plant and facilities at Sellafield used for reprocessing Magnox fuel and associated wastes and materials;

— the fleet of Magnox power stations designed and operated by CEGB in the 1960s and 1970s.

These facilities were built without any consideration at the time for future costs of decommissioning and clean up.

The NDA's estimate of the historic liability based on 2005/06 LTP assessments and set out in its approved Strategy is £62.7 billion (£35.4bn discounted). The LTP for 2004/05 was £56bn. This does not represent an increase in the volume of liabilities, but rather better measurement.

As the Committee has noted (para 13) the treatment and disposition of plutonium and uranic waste material is not included in the historic liability estimate. At present it is categorised as a zero based asset, but if it were at some stage to be reclassified as waste it would add significantly to the overall legacy estimate. No such decision is pending and it would be wrong to speculate on the issue at this stage.

The cost of dealing with the historic legacy has no bearing at all on the issue of new build. The Government believes that the historic nuclear legacy will need to be dealt with irrespective of whatever decision is eventually taken on the need for nuclear power in the future. It would be against the national interest not to do so in terms of safety, security and the environment. And the cost of dealing with the legacy cannot be taken as a benchmark for the possible future costs of decommissioning any new reactors. As mentioned the legacy is made up of experimental facilities created 30 and 40 years ago when no thought was given to eventual decommissioning.

There are of course civil nuclear liabilities which do not fall directly to the NDA's LTP process and which are, therefore, not included. For example the NDA has been charged with the oversight of BE's fleet of nuclear power stations in terms of decommissioning proposals and assessing uncontracted liabilities. BE have updated their decommissioning and uncontracted liabilities plans and the NDA has approved them. The liabilities are now valued at £4bn—the last assessment (July 2004) was for £2bn. The increase reflects an increase in the liabilities following BE's review and a move from a 3.5% discount rate to a 2.2% discount rate.

The Committee has commented (para 16) that commercial income derived from THORP and other sources will not contribute much to the level of funding provided in respect of nuclear clean up. The Government does not share this view. At present more than half of the NDA's funding has come from its commercial income. This proportion will, of course,

decline over time as commercial businesses cease operation. Both the DTI and the NDA are fully aware of the volatility and risks around the commercial income of the NDA. These risks are closely monitored and the NDA sets its budgets in order to take account of these risks.

We note and appreciate the Committee's concern in respect of the income derived from the THORP plant, but the closure of the plant has not as yet affected the NDA income stream significantly, having been offset by higher than expected income from the remaining operational Magnox stations.

The natures of the contracts which are placed with THORP by its customers are such that the full extent of any loss of income will not be known until the plant has restarted. This is scheduled for the end of the year. The NDA is confident that contract commitments can still be met by 2010. The incident is the subject to an insurance claim so we are not able at present to comment on any financial details.

The NDA's commercial income streams provided an additional £257m in the financial year 2005/06: this was triggered by high electricity prices went up and the 'sweating' of assets. A part of this went towards additional decommissioning work but they also created a £90m contingency fund (EYF).

The Committee has cautioned (paragraph 25) against any further restructuring of the organisations involved in the nuclear industry sector (including the NDA and UKAEA) because the industry needs to provide stability to retain and attract skills, and provide confidence to the public. This has been a matter of concern to government and, as a consequence, the NDA has a duty under the Energy Act 2004 to provide for the maintenance of a nuclear skills base. It has set out its proposals for so doing in its approved Strategy.

As a consequence the NDA considers the nature of the skills base it requires as part of the LTP process. Each of the NDA's sites produces a skills strategy which, as a minimum, covers the following areas: key skills required in the short, medium, and long term; identification of skills gaps and links to the migration of the existing workforce; sensitivities relating to demographic change; recruitment and training strategies; links with training providers; succession planning; and supply chain strategies for long-term availability of skills. The sites' skills strategies are analysed and developed by the NDA to ensure the appropriate supporting infrastructure is in place, and that any key issues or skills gaps are identified.

The Government believes that the current skills status of the nuclear industry is generally sound and there is no immediate overall nuclear skills shortage. But we are not complacent. We have assisted with the establishment of Sector Skills Council to represent the needs of the nuclear industry, with 'Cogent' the Sector Skills Council taking a strategic view of the nuclear sector to ensure that the education and training base can meet the nuclear employers' current and future needs. For its part, Cogent has established Nuclear Advisory Council to ensure that it gathers the views of employers and their supply chain. This will enable it to better estimate demand and scope teaching/education supply issues. In addition, the industry itself in conjunction with Cogent is developing a Sector Skills

Agreement, which focuses on actions related to the issues that have emerged from recent research to address existing and potential skills gaps and shortages.

The UKAEA: response to Recommendations 3, 4 and 5 (UKAEA restructuring)

The Committee's support for the proposed development of the Harwell Science and Innovation Campus (HSIC) and the "UKAEA's determination to build on its scientific reputation and that of the Oxford area in attracting hi-tech companies to the Campus" and the Committee's observation of the extent of "progress being made in attracting other organisations onto the site" is very encouraging.

The Committee's reassuring lack of concerns about the UKAEA's operation of the industry's pension fund has also been noted. Indeed, since the Committee's inquiry, UKAEA's Thurso Pensions Office has won, in rigorous competition, the contract for the administration of the NDA's new scheme—now known as the Combined Nuclear Pension Plan (CNPP). This was excellent news for UKAEA and those employed in Thurso.

Following the Strategic Review of UKAEA approved by government last year, UKAEA aims to establish a new business arm within UKAEA (currently called UKAEA Ltd), which will compete for the management of its own and other sites, and win non-NDA business in the UK and overseas. UKAEA's strong preference is for the Pensions Office to become part of the commercial activities of UKAEA Ltd. The successful bid to the NDA for administration of the CNPP is seen by UKAEA as the basis for competing for the administration of other public service pension schemes. UKAEA understands that competing more widely in this way will trigger competition for the future administration of its own scheme (the Combined Pension Scheme, CPS).

As stated by the Committee (at paragraph 13) it is true that there is still considerable uncertainty attached to the overall scale of civil nuclear liabilities, especially at Sellafield. However, the experience at UKAEA sites provides some grounds for optimism that this issue can be addressed. UKAEA has been focused on decommissioning since the mid 1990's. Its liabilities are now well understood, and estimates have steadily decreased over the past ten years as facilities have been progressively decommissioned and the associated liabilities eliminated. Working with the NDA, UKAEA has been able to effect a step change in its liabilities estimate—a reduction of over £1 billion—through programme acceleration and greater innovation.

As observed by the Committee, the future is by no means certain for UKAEA Ltd, but government cannot secure the advantages of a competitive market without introducing a greater degree of risk and uncertainty for those involved. Having said that, the great majority of UKAEA's decommissioning employees will be transferred in to the Site Licensee Companies (SLCs), the ownership of which will be granted by the NDA to the successful bidder or Parent Body Organisation (PBO) for the duration of the competed contract. They will, of course, be affected by the management approach of the successful bidder but will not themselves be directly involved in the development of a commercial business in the competitive market place, which will involve a relatively small number of employees.

UKAEA understands that it will be required to compete in a demanding market, but the first year of UKAEA's decommissioning operations under contract to the NDA, since 1st April 2005, has indicated that UKAEA's employees and Board have the capacity to rise to the challenge of the new competitive environment in which the business now finds itself. For this reason, UKAEA has commented that it regrets the continued focus on "uncertainty" since it believes that this will inevitably erode the confidence of its employees, for many of whom the creation of a successful UKAEA Ltd is considered to be the best way to ensure continued, rewarding careers.

UKAEA Ltd's commercial success will be largely determined by the outcome of the future competitions for its own sites, and most significantly the competition for UKAEA's main site at Dounreay. By the time of competition for Dounreay (2008/09), UKAEA Ltd will have been operating in 'shadow mode' for a significant period and when the competitions commence, it will be bidding to the NDA with its Alliance partners (CH2MHILL and AMEC); hence, UKAEA Ltd should be in the position to present the NDA with a highly competitive bid for its sites.

In addition, UKAEA's strategy is not to rely exclusively on winning the future contracts for its own sites, but to bid with its Alliance partners for other NDA sites and to develop new non-NDA business in the UK and overseas. UKAEA's agreements with its Alliance partners will also help to identify potential work on a bilateral basis. Already, as the Committee has noted, UKAEA has signed a Memorandum of Understanding with AMEC and KOPEC, South Korea's Korean Power Engineering Company, to target low risk work in nuclear waste management and repository projects, decommissioning, reactor services and nuclear plants in both Korean and international markets. Although the MoU does not identify specific contracts, UKAEA believes that it will open the door to a number of future opportunities.

It is recognised therefore, that the future for UKAEA Ltd depends on its sustained good performance as the industry enters a more commercial environment. UKAEA Ltd must earn enough through NDA fees and income from new, non-NDA contracts to cover the costs of implementing its approved business plan. UKAEA's demonstrated performance in 2005/06 gives increased confidence that it can do so, although we recognise that it will face the same uncertainties as any new business starting up in a commercial market place.

To prepare UKAEA for the competitive environment in which it will be operating, the UKAEA Board and the government are fully committed to UKAEA being restructured along the lines already indicated to the Committee. This restructuring will both develop and realize the full value of UKAEA's commercial potential and facilitate the NDA's competition strategy. We would seek to assure the Committee that it is fully recognized that this restructuring, which will eventually entail the divestment of UKAEA Ltd, does constitute a major transformation of UKAEA and that in the course of achieving it, we need to properly ensure that the highly acclaimed and important research and development of fusion at Culham is left unaffected and sustained (as further discussed below).

To enable the NDA to compete the management of sites, UKAEA must restructure to create "Site Licensee Companies" which will form separate entities at Dounreay and—possibly—Windscale (discussed below), and a cluster at Harwell and Winfrith, as envisaged in the NDA strategy. None of UKAEA's plans for restructuring will in any way compromise safety, which remains the highest priority for all its activities. We will not begin to implement the planned restructuring until the independent regulators are confident that these changes do not pose any risks to safety or the environment.

The NDA's implementation of its competition strategy is largely consistent with UKAEA's restructuring plans although as highlighted by the Committee there has been a debate over the approach to Windscale. In August, the NDA initiated a discussion with stakeholders on future options for the Windscale site ranging from the status quo through integration of the site with Sellafield with the UKAEA operating the site as a large scale Tier 2 contractor to BNG, to wholesale integration with Sellafield. It would be true to say that UKAEA continues to believe that the status quo represents the best way forward in the light of excellent performance at Windscale and of innovative plans for accelerated decommissioning at the site which are currently under development. However, UKAEA is pleased that the NDA consultation recognised the achievements of the UKAEA team at Windscale, and it welcomes the opportunity for dialogue on the implementation of the NDA's finally selected option.

We welcome the Trade and Industry Committee's recognition of the potential of commercially viable fusion generation to reduce carbon emissions, and their support for continued UK participation in international fusion development. UKAEA believes that its contribution to the fusion programme will not be adversely affected by current restructuring plans. The functions which UKAEA carries out directly for government, primarily the fusion programme and the development of the Harwell Science and Innovation Campus, will remain in the public sector within a smaller ongoing UKAEA at Culham as discussed further below.

Research into Nuclear Fusion: response to Recommendations 6 & 7

The Government strongly supports ITER, the experimental fusion reactor to be built in Cadarache, France. It recognises that nuclear fusion has the potential to provide a new major source of energy using water and lithium, which are abundant and widely available.

Additionally it notes that a fusion power station would create no greenhouse gases during its operation and no long-lived nuclear waste. However, there are many scientific and technological challenges to overcome before fusion becomes a viable energy source. The next step towards this is the construction of ITER.

ITER is a global, publicly funded project, and is driven by the need for secure, sustainable, and environmentally friendly energy supply. China, EURATOM (European Atomic Energy Community), India, Japan, Russia, South Korea, and the United States are collaborating on the €5bn ITER project which is expected to start operating in 2016. (The European Commission has conducted negotiations for EURATOM.) The goal of the international fusion research programme, starting with ITER, is the demonstration of full-scale power generation in a prototype power plant within 30-35 years.

The EU is hosting ITER and is committed to its construction and subsequent operation. The EU is contributing 50% for the construction and the other 6 parties 10% each, allowing for a reserve of 10% for contingencies.

The EU's contribution to the construction of ITER (as well as an accompanying programme of fusion research, including continued funding for the UK's JET facility) will come from the FP7 EURATOM fusion research budget 2007-2011 of €1947m. (Nuclear fission and radiation protection research has an allocation of €287m in the FP7 EURATOM programme.)

In parallel to ITER development, there needs to be put in place a programme to research, develop, and test the first-wall materials required for a commercial reactor which will require the construction of the material testing facility IFMIF.

The ITER Agreement negotiation process has been completed, and Ministers of the seven international parties (Commissioner Potocnik for EU) met in Brussels on 24 May this year to initial the ITER Agreement.

A Proposal for a Council Decision to authorise the Commission to conclude the ITER Agreement was recently adopted at the Competitiveness Council on 25 September. Signature of the Full Agreement is likely to occur later this year (currently planned for 21 November), with construction likely to start in 2007 after site construction permits are obtained.

The UK is making a very significant contribution to fusion research. The UK makes a contribution to the European fusion programme via its overall contribution to the EU budget. In addition, the UK invests in fusion research through EPSRC (Engineering and Physical Sciences Research Council) awards to UKAEA Culham, and these will amount to around £95m over four years to 2007/08. The EPSRC funding covers the UK's own national programme of fusion research and the UK's contributions to the operation of JET (Joint European Torus). UKAEA operates JET as a research facility for European scientists and this operation is mainly funded by EURATOM. It is expected JET will continue to 2010 or even longer.

The amount of funding for fusion research for future years from EPSRC will be determined following the current Comprehensive Spending Review.

The restructuring of UKAEA will not affect the operation of the fusion research programme. Responsibility for fusion research will remain with the UKAEA NDPB.

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