Regulatory Policy Committee

Amendment of regulation of nuclear sites

Department for Business, Energy and Industrial Strategy

RPC rating: fit for purpose

Description of proposal

The Nuclear Installations Act 1965 (NIA65) provides the framework for licensing nuclear sites and for the third party nuclear liability regime in the UK. The framework requires a nuclear site to satisfy the "no danger" criterion – meaning that it is suitable for unrestricted use – before it can be released from nuclear regulation. The no danger criterion was interpreted by the regulator in 2005, following legal advice and extensive public consultation, as requiring (among other things) the removal of virtually all of the foundations and sub-structures from a site for disposal elsewhere. The Department considers that this interpretation of the criterion is inflexible and inefficient. In particular, risks of excavating, transporting and disposing of lightly-contaminated substructures are often higher than the risks of leaving them *in situ*; in such cases, the strict interpretation of the criterion increases public risk.

The Department proposes to amend the regulatory arrangements to align NIA65 with the OECD Nuclear Energy Agency's recommended "Paris Convention Decommissioning Exclusion Criteria". The Paris criteria do not explicitly use the term "no danger", referring instead to risks being sufficiently low that it is no longer necessary to apply the nuclear third party liability regime. Under the proposal, therefore, the Office for Nuclear Regulation (ONR) would be required to confirm only that the requirement for nuclear third party liability had ended and that all nuclear safety and security matters had been resolved. Continued nuclear regulation would then be unnecessary. Radiological protection would be regulated by the Health and Safety Executive (HSE), as is normal for non-nuclear sites. Land remediation would continue to be regulated by the environment agencies under the radioactive substances regulations (RSR) (and other environmental protection legislation). The RSR allow for a site to be re-used while still being regulated.

Impacts of proposal

The proposals would bring net benefits primarily to businesses seeking to decommission their nuclear sites. In the UK, these currently comprise the businesses responsible for the 10 sites with Magnox nuclear power plants, Harwell, Winfrith, Sellafield and Dounreay. The Department does not monetise the impacts at Harwell and Sellafield. Savings from Harwell are expected to be small, while the decommissioning of Sellafield will take many decades and the time and other savings from satisfying the Paris criteria rather than the no danger criteria are subject to particular uncertainty. The Department is unable to monetise those impacts at this stage without further evidence. The IA anticipates that the policy will be implemented after 2021 and that the primary benefits of the policy will accrue up to 2037. The Department has, therefore, selected an appraisal period of 2021-2037. Only Winfrith is expected to reach the criteria for exiting the nuclear third party liability regime during the appraisal period and is, therefore, the only site for which benefits from insurance premium savings accrue during the appraisal period (see below).

Benefits

The business net present value of £383.1 million consists mainly of two benefits:

Savings from excavating the sub-surface material. The proposals would allow nuclear sites to leave low level waste in the soil. Excavating sub-surface material requires complex engineering, specialist equipment and skilled workers so the costs avoided by leaving waste in the soil can be considerable. Using estimates from the nuclear site companies and the Nuclear Decommissioning Authority (NDA), the IA estimates total savings from reductions in excavation to be between £114.8 million to £193.8 million, with a best estimate of £154.2 million (over 17 years in present value terms discounted to 2021). Leaving the low risk waste in the soil would also reduce the radiological risks from excavation. The IA does not, however, monetise the reduction of such risk.

Savings from reduced transport and disposal wastes. Nuclear site companies would also save the money that would otherwise be used for container purchase, transportation and disposal charges. Multiplying the estimated volume of waste by the associated cost per cubic metre, the NDA has provided low, and high, cost estimates of savings from transportation and disposal wastes. Combining the estimates from NDA and nuclear site companies, the regulator obtains a best

estimate of savings of £228.7 million in present value terms over the appraisal period.

In addition, nuclear site companies could experience insurance savings from exiting the nuclear third party liability. Winfrith is the only site for which benefits from insurance premium savings are expected to accrue during the appraisal period. Based on data from a number of nuclear sites, the IA estimates the total savings from standstill costs to be between £1 million and £3 million.

Costs

The proposals would generate familiarisation costs on nuclear site operators. ONR expects two 40-page guidance documents for operators would be read by around 27 middle-ranking managers. Assuming a reading speed of 200 words per minute, 500 words per page and wages from Annual Survey of Hours and Earnings and 20.2 per cent non-wage labour costs, the Department estimates total familiarisation costs at £7,700.

Site licence operators are expected to incur additional costs in relation to the monitoring of radioactivity and contamination to ensure that environmental safety requirements are met. Over the appraisal period, the costs for the Winfrith site have been monetised at £1.2 million in present value terms.

Wider Impacts

Savings from reduced greenhouse gas. Using estimates of the CO_2 emissions avoided from leaving subsurface material *in situ* and central price estimates for non-traded carbon, total greenhouse gas savings are estimated at £4.7 million.

The IA provides a qualitative assessment of other wider impacts. These include: the benefit of allowing sites to be re-used earlier; negative employment impacts in the excavation and transportation sectors; and reduced risk of accidents to workers excavating waste and road traffic accidents relating to transport of materials to waste facilities.

The Department explains that the proposals would not result in an increased risk to the public or the environment. Sites would be released from nuclear regulation only if all nuclear safety and security matters have been resolved, and would remain

subject to regulation by HSE (radiological protection) and environment agencies (land remediation).

Quality of submission

The Department's assessment of the overall impacts of the proposals, including the impacts on business, is fit for purpose. The IA sets out clearly the rationale for the proposals and uses a proportionate level of evidence to support estimates of the impacts. The Department has also considered a non-regulatory option, whereby the no danger criterion is re-interpreted by the ONR, and explains the additional risk and uncertainty associated with this option.

The IA would benefit from providing:

i) further discussion of how the overall balance of cost and benefits would be affected by a longer appraisal period and demonstration that the selected appraisal period reflects a fair comparison of overall costs and benefits as well as being the most practical choice;

ii) a clearer explanation of how the overall cost and (particularly) benefit estimates have been calculated. A time profile of the figures presented in the tables on page 15 would be helpful;

iii) confirmation that there is no obligation on the UK to adopt the OECD Nuclear Energy Agency's recommended criteria and that the proposal is therefore a domestic policy choice;

iv) a clearer explanation of whether there are any further familiarisation costs to site licence companies associated with using "…*the necessary in-house expertise*…" (paragraph 53, page 11);

v) further information on the interpretation of the no danger criterion by the regulator in 2005, in particular how far it was driven by legal or policy considerations and how it compared with the intention of the original regulations;

vi) reconciliation of the assumed "…*conservative figure of £1 million per year*…" for regulatory cost reduction with the actual figure of £0.273 million per year for Winfrith (paragraph 72, page 14); and

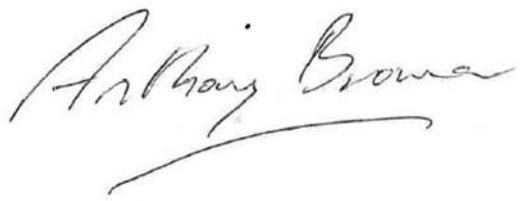
vii) a small and micro business assessment (SaMBA) explaining that no small or micro businesses are affected by the proposals. The SaMBA could be improved by providing information on the number of employees at each site and considering whether there could be any consequential impacts on small businesses, for example if any might presently be involved in excavation or transport of material.

Departmental assessment

Classification	To be confirmed
Equivalent annual net direct cost to business (EANDCB)	-£23.3 million
Business net present value	£383.1 million
Overall net present value	£387.8 million

RPC assessment

Classification	To be determined once the framework rules for the current parliament are set
Small and micro business assessment	Sufficient



Anthony Browne, Chairman