

Nuclear Safeguards Bill

Department for Business, Energy and Industrial Strategy

RPC rating: fit for purpose

The impact assessment (IA) is now fit for purpose as a result of the Department's response to the RPC's initial review. As first submitted, the IA was not fit for purpose.

Description of proposal

'Nuclear safeguards' is the term for the reporting and verification processes by which nation states demonstrate to the international community that civil nuclear material is not diverted into military or weapons programmes. They are essential to enable the UK to engage in civil nuclear trade, allowing nuclear power generation, and to fulfil international standards as a responsible nuclear state. The safeguards are an important part of the international non-proliferation regime to prevent the spread of nuclear weapons.

The IA states that the UK's current nuclear safeguards obligations are fulfilled through the UK's membership of the European Atomic Energy Community (Euratom). Based upon the Government's *'Nuclear materials and safeguards issues'* position paper, the RPC understands that the UK can no longer be a member of Euratom after it leaves the EU as, in accordance with Article 106(a) of the Euratom treaty, Article 50 of the EU treaty applies also to Euratom. This reflects the fact that the two treaties are, uniquely, legally joined. The IA states that a new safeguards regime is, therefore, needed to continue fulfilling these obligations.

The Nuclear Safeguards Bill is intended to create a legal framework for a nuclear safeguards regime to replace the current one when it ceases to have effect in the UK in 2019, enabling the Office for Nuclear Regulation (ONR) to fulfil the UK's assured adherence to international standards. The Bill itself does not impact on business; the related secondary legislation would implement specific requirements for the industry. The IA considers two options for these requirements. Option 1 is to replicate standards of nuclear safeguards broadly equivalent to Euratom. Option 2 is to apply International Atomic Energy Agency (IAEA) standards, which are lower than Euratom equivalent. Option 1 is the Government's preferred option.

Impacts of proposal

The IA states that there are currently 15 nuclear reactors operating at eight sites across Great Britain, providing around 25 per cent of electricity generated, and that there are around 100 facilities that hold radioactive material and fall in scope of the current safeguard regime under Euratom. These include sites involving activity throughout the nuclear industry life cycle, covering fuel enrichment and fabrication, active generating plant, decommissioned sites, waste facilities and research facilities. Monitoring and inspections are required for all areas between which material is moved (known as 'balance areas'). There are around 200 of these in total. The IA states that around 216 inspections were undertaken in 2014.

The IA considers the impacts of the policy against two counterfactuals, a 'do nothing' counterfactual in which there is no domestic legislation to provide for replacement of the Euratom treaty and a 'status quo' counterfactual, basically the current arrangements for the UK as a member of Euratom.

Costs

Administration Costs. This covers the cost to the ONR and nuclear site operators of operating the safeguards regime. These include inspections, training, and purchase and maintenance of monitoring and IT equipment. The Department estimates one-off costs of £2.5 million for options 1 and 2, and annual costs of £9.5 million and £7.0 million for options 1 and 2, respectively. These costs are primarily estimated using data from the European Union budget, an assessment by the UK nuclear regulator (the ONR), and information supplied by the Nuclear Decommissioning Authority. At present, the costs of the UK's nuclear safeguards regime are covered by UK government payments to Euratom, funded under general taxation. It is assumed in this IA that these costs will continue to be funded by the taxpayer. Existing legislation provides the power, through regulations, to recoup these costs from industry although no decision to do this has been made.

Cost of Compliance by Nuclear Sector. These costs are associated with monitoring and reporting to the ONR and the time spent by staff preparing for, and undergoing, inspections. The cost to the nuclear sector of monitoring is estimated at £3.0m per year under option 1. It is anticipated that there would be a 25 per cent reduction in monitoring activity under option 2, reducing annual costs to around £2.3m per year. The cost of preparing for, and undergoing, inspections is estimated at £2.5m per year under option 1. The staff time requirement relating to an inspection under Euratom is estimated to be four times greater than that under IAEA guidelines.

With the frequency of inspections under the IAEA estimated at half of that under Euratom, the costs under option 2 are estimated at £0.3 million per year. Overall, the costs to the nuclear sector of compliance under options 1 and 2 are £5.5 million and £2.6 million per year, respectively. Some £0.8 million of this would be incurred in any case to comply with other regulation, making an estimated £4.7 million (option 1) and £1.8 million (option 2) additional cost per year relative to a 'do nothing' counterfactual.

The Department estimates these costs over a 38-year time period (2012 to 2050) in line with the Department's modelling approach in this area. This results in central estimates of £220 million and £140 million in present value terms, for options 1 and 2 respectively. Of this, £70 million and £30 million, respectively, are costs to business (i.e. the compliance costs to the nuclear sector). Against a 'do nothing' counterfactual, the IA also reports very large "*Less direct...costs to non-nuclear plant that under the policy options do not benefit from making higher profits in a market without nuclear.*" (paragraph 4.24 and table 6, page 21).

Against a 'status quo' counterfactual, the cost would be the additional set up costs and transition costs for the ONR, assumed to be a cost to taxpayers, and familiarisation/transition costs to business.

Benefits

Consumers. The Department describes a very large net social benefit to energy consumers against a 'do nothing' counterfactual where no new safeguards regime is put in place and nuclear can therefore no longer play a part in the mix of electricity generation. These benefits are largely avoided costs attributable to needing large volumes of renewables generation and/or carbon capture and storage in the counterfactual in order to meet decarbonisation objectives. There are also associated costs of connecting low carbon generating capacity from more-distant locations and operating a more intermittent system.

Business. The IA describes very large "*...avoided lost profits to existing nuclear plant...*" (paragraph 4.24, page 21). This impact arises from the assumption in the 'do nothing' counterfactual that, over time, these plants would not be able to continue to operate. This is described in the IA as the most direct benefit to business of the policy. The Department also sets out a very large benefit to business consumers of energy. This impact arises from the pass through of higher costs in energy markets that result from the forced closure of nuclear plant and its replacement by more

expensive forms of electricity generation. The Department considers this to be an indirect impact.

The Department does not expect there to be any significant power sector impacts relative to the status quo counterfactual of current Euratom membership. Against this counterfactual, impacts on business, both in the power sector and as energy users, are, therefore, estimated to be zero.

Quality of submission

Issues addressed following the RPC's initial review

The RPC identified in the IA, as initially submitted for RPC scrutiny, five issues on which the RPC would have been likely to issue a red-rated (not fit for purpose) opinion of the impact assessment. Following the RPC's initial review, the department submitted a revised impact assessment that responded to these points as follows.

Requirement for additional counterfactual. The original IA used only a counterfactual of the UK having no nuclear safeguards after leaving Euratom. The impact of leaving Euratom had not, however, been assessed for business impact accounting purposes. The RPC's position was that the Department needed to include an alternative counterfactual of the existing (Euratom) arrangements remaining in place, and that this alternative counterfactual was required for the correct accounting of business impacts. This counterfactual would also inform more clearly the relevant ministerial decision, which is about what alternative nuclear safeguarding arrangements should be in place (rather than whether there should be any arrangements at all). The IA now includes an assessment of the impacts of options 1 and 2 against a 'status quo' counterfactual, including tables such as 3b and 4b on pages 14 and 16.

Comparison against 'no legislation' counterfactual. The IA assesses very large benefits to businesses generating electricity and energy consumers (including businesses) against a counterfactual of no nuclear safeguards (page 21).

Comparison of options 1 and 2. The original IA did not provide a clear narrative for the preference for option 1, which had a higher cost than option 2. The revised IA provides additional explanation for the preference for option 1 (pages 17-18). This is principally that continuing to be closely aligned to current Euratom standards would provide for greater public, trading partner and international confidence.

Compliance costs. The IA now includes a qualitative assessment of one-off, transitional costs to business, such as familiarisation (pages 20-21). This notes that there will be some costs but explains why these are likely to be small, for example because businesses already engage with the ONR on a range of other issues.

Scope of the IA. The original IA referred to areas covered by the Euratom Treaty that were largely outside the scope of the IA, without explaining how the impacts in these areas would be captured. The revised IA clarifies these areas and states that, where applicable, further IAs covering these other aspects of Euratom withdrawal will be undertaken (paragraph 1.2, page 7).

There were a number of non-red rated, yet significant, comments in the RPC's initial review, such as clarification of the price and discount base years and appraisal period used. The Department's revised IA also generally responds to these comments.

Following these revisions to the IA, in particular the inclusion of an additional counterfactual, the RPC can confirm that the IA is sufficient at this stage. The RPC understands that the IA for the "...associated secondary legislation for the proposed regime will provide refined estimates and be subject to detailed consultation and a further developed impact assessment." (paragraph 1.3, page 7). This will need to include the assessment of one-off, transitional costs to business, such as familiarisation, referred to above. There are some areas where the present IA could be improved significantly.

Comparison of options 1 and 2. In discussing the reduction in burden on industry and the regulator of fewer site inspections in option 2, the IA notes this burden is a "...very small proportion of the overall costs and benefits." (bottom of page 5). The estimated annual costs of options 1 and 2 are £15.0 million (£9.5m administration; £5.5m compliance) and £9.6 million (£7.0m administration; £2.6m compliance), respectively. On this basis, the cost of the preferred option is, therefore, more than 50 per cent higher than option 2. The IA could present more clearly the comparative costs of options 1 and 2.

Evidence to justify the preference for option 1. Given its significantly higher costs over option 2, the IA would benefit from a stronger justification for the preference for option 1, specifying more clearly the additional benefits it is considered to bring. In doing so, it should address more explicitly whether the additional benefits of option 1 derive entirely from consistency with EU standards, or whether there is a cost-benefit case for the greater frequency/intensity of inspection and wider scope (e.g. inclusion of uranium ores – paragraph 1.12) in option 1, irrespective of the EU standards. It should also provide any supporting evidence that the public, business or trading

partners would be insufficiently confident in a regime that is fully compatible with IAEA standards (but does not exceed them).

ONR set-up costs to carry out the nuclear safeguard role. The ONR has estimated that it will incur one-off transition costs of around £2.5 million to ensure it is equipped to carry out the inspections itself. This is presently the estimated net cost (central scenario) of option 1 relative to the ‘status quo’ counterfactual. These costs will cover the recruitment and training of inspectors and the procurement of a Safeguards Information Management System in order to provide reporting data to the IAEA. The Department should consider further the difficulties and risks involved in setting up a new system during consultation on the secondary legislation.

Efficiency gains/economies of scale benefits. The RPC’s initial review questioned why the adjustment for loss of economies of scale (as domestic arrangements replace those that are EU-wide) is not factored into the central estimates for the policy options. The revised IA states that “*Initial estimates suggest there is not large scope for reduction in economies of scale, which is why this has not been included in the central estimate, but we will further refine our assumptions for secondary legislation.*” (paragraph 3.18, page 14). The summary sheets for the revised IA includes a new non-monetised impact: “*...potential efficiency gains from the regulator delivering more services in parallel to the industry as the ONR already provides services for nuclear safety, security, and transport regulation.*” The Department will need to ensure that the IA for the secondary legislation treats both of these impacts on the same basis or explains why they should be treated differently.

Medical isotopes. The IA states that “*Nuclear safeguards provisions do not cover other radioactive material such as medical radioisotopes which are out of the scope of both this Bill and Impact Assessment.*” (paragraph 1.8, page 7). The IA would benefit from explaining further why trade in medical isotopes is not affected by this measure and providing assurance that any impact or risk will be assessed, such as in the further IAs referred to at paragraph 1.2.

Net present value (NPV) estimates. The IA would benefit from including a table or supporting spreadsheet showing how the 38-year present value figures (2012 prices and base year for discounting) in tables 5a and 5b (page 20) have been calculated.

“N/A” in summary sheet boxes. In response to the RPC’s comments in its initial review, the Department has removed its zero values from the summary sheets, e.g. for the NPV, business NPV and EANDCB figures. This reflects the RPC’s position that completion of the summary sheets of the IA should be based on the assessment of the whole policy, i.e. both primary and secondary legislation, against the appropriate counterfactual. The Department has inserted “n/a” in place of the zero

values. The RPC's understanding is that figures have not been included in the summary sheets because, although discussed at length in the text, they are insufficiently robust at this stage, and that robust figures will be provided at the secondary legislation stage. "n/a" should not be taken to mean "not applicable". It would be helpful if the IA made this clear.

Clarification of legal requirements outside Euratom. As indicated in the RPC's initial review, the IA would benefit from explaining further the nature of the IAEA standards, in particular whether they are binding international obligations. This might also be relevant to the consideration of the measure under the business impact target (BIT), once the BIT and associated framework has been set.

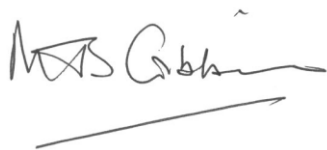
Departmental assessment

Classification	n/a
Equivalent annual net direct cost to business (EANDCB)	n/a (indicative assessment of business impacts included in main body of the IA)
Business net present value	n/a
Societal net present value	n/a

RPC assessment

Classification	To be confirmed at the secondary legislation stage
Small and micro business assessment	Fit for purpose at this stage
RPC rating (of initial submission)	Not fit for purpose

Opinion: final stage impact assessment
Origin: domestic
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