Regulatory Triage Assessment

Title of regulatory proposal	The Nuclear Decommissioning and Waste Handling (Finance and Fees) (Amendment) Regulations 2016
Lead Department/Agency	Department for Energy and Climate Change
Expected date of implementation	31 July 2016
Origin	Domestic
Date	4 July 2016
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Departmental Triage Assessment	Low-cost regulation (fast track)

Rationale for intervention and intended effects

Background

1. The UK Government has put legislation in place, the Energy Act 2008 (the Act), to protect the tax payer from having to bear the waste and decommissioning costs of new nuclear power stations. The Act requires operators[1] of new nuclear power stations to have secure financing arrangements in place to meet the full costs of decommissioning and their full share of waste management and disposal costs.
2. Under the Act, all new nuclear operators are required to have a Funded Decommissioning Programme (FDP) approved by the Secretary of State and to comply with that programme thereafter. The operator is legally required to make prudent provision for their liabilities, such that the risk of recourse to the taxpayer is remote.
3. Section 45 of the Act requires the nuclear operator to pay the Secretary of State for costs incurred in considering the FDP in accordance with the detailed cost recovery arrangements set out in underlying regulations – the Nuclear Decommissioning and Waste Handling (Finance and Fees) Regulations 2013 (the 2013 Regulations).
4. The existing regulations allow DECC to recover some of the costs of obtaining external advice in relation to an operator's FDP from the point when the FDP is formally submitted to DECC.
5. However, our experience has shown that external advice should be available in advance of the FDP's formal submission in order to support engagement between DECC and the operator while they develop their approach to the FDP. We believe that bringing forward the point from which cost recovery can begin on the FDP, without imposing additional obligations on the operator, will result in a quicker, more efficient and cost effective negotiation.
6. The Energy Act 2013 introduced provisions to address this issue. At the same time the cost recovery regime was further extended to include advice prepared for two FDP-related documents (see paragraph 8 below) which are integral to the FDP negotiation as a whole. This RTA concerns the arrangements to extend the FDP cost recovery regime by amending the 2013 Regulations.

Policy issue

7. The proposed amendments to the 2013 Regulations, set out in the Nuclear Decommissioning and Waste Handling (Finance and Fees) (Amendment) Regulations 2016 and considered in this RTA, create a comprehensive cost recovery framework through which all external adviser costs relating to a new nuclear operator's waste and decommissioning arrangements can be fully recovered from the operator, rather than

[1] This RTA uses the term "operator" rather than "developer" to align with the terminology in existing legislation, e.g. the Energy Act 2008.

some costs being borne by the taxpayer.

8. The cost recovery regime was extended in the Energy Act 2013 to cover costs for advice incurred:
    - in considering proposals in relation to a **FDP** or a modification to a FDP before its formal submission to the Secretary of State for approval;
    - on a **Waste Transfer Contract** (WTC) which the Secretary of State will expect to enter into with the operator, regarding the terms on which the Government will take title to and liability for the operator's spent fuel and intermediate level waste for disposal in a geological disposal facility; and
    - on a **Section 46 Agreement** between the Secretary of State and the nuclear site operator which sets out the basis on which SoS will, and will not, be able to utilise her powers to modify the FDP, thereby providing greater certainty to investors.

Table 1: Cost recovery summary under current and proposed legislation

	Section 46 Agreement	**WTC**	**FDP**
Existing legislation Nuclear Decommissioning and Waste Handling (Finance and Fees) Regulations 2013	No cost recovery (i.e. costs borne by exchequer/ taxpayer)	No cost recovery (i.e. costs borne by exchequer/ taxpayer)	Cost recovery following formal FDP submission
Proposed amendment Nuclear Decommissioning and Waste Handling (Finance and Fees) (Amendment) Regulations 2016	Cost recovery from point when of the Secretary of State proposes a S46 Agreement or an amendment to a S46 Agreement.	Cost recovery from point when the operator makes a proposal to the Secretary of State regarding a WTC or an amendment to a WTC.	Cost recovery from point when operator puts forward proposals to the Secretary of State in relation to the FDP (or modification of a FDP) for her consideration but before its formal submission.

<u>**Rationale for the intervention**</u>

9. Robust scrutiny of the FDP, Section 46 Agreement and the WTC is essential to meet the Government's objectives of ensuring that operators make prudent provision for their waste management, waste disposal and decommissioning costs and, in so doing, that the risk of recourse to public funds is remote. Ensuring that the full FDP and related costs for this work can be recovered from the operator, creating a comprehensive cost recovery regime that enables such robust scrutiny to take place, is the primary driver for making this legislative amendment.

10. The complex commercial nature of the FDP, Section 46 Agreement and the WTC, make support from external sources of technical, legal and financial expertise essential to ensure such scrutiny is robust. In addition, the Nuclear Liabilities Financing Assurance Board (NLFAB), an advisory non-departmental public body, provides independent scrutiny of, and advice on, the financial arrangements of the FDP to the

Secretary of State. The proposed amendment would enable NLFAB to become involved in some discussions with the operator at an earlier stage.

11. DECC will require technical, financial and legal support from external advisers together with engagement with NLFAB during the development phase of future FDPs, prior to their formal submission. This facilitates and supports meaningful engagement between DECC and prospective operators while they advance their approach to the FDP. The proposed amendment would enable engagement on the Section 46 Agreement and the WTC to start alongside the FDP, as required, helping to streamline the negotiations. However, in practice we do not expect the bulk of the Section 46 Agreement negotiations to take place until the FDP is reasonably well developed.

<u>Viable policy options</u> (including alternatives to regulation)

12. The viable policy options, including alternatives to regulation, are as follows:

Option 1: ‘Do nothing’ in which case those FDP costs not already covered by legislation will continue to be borne by the taxpayer.

Option 2: Take a non-regulatory approach such as (a) entering into agreements with prospective operators whereby they would pay the Department directly for the costs of advice incurred or (b) entering into agreements requiring prospective operators to pay advisers directly for advice provided to the Department. Statutory provision already exists in relation to cost recovery for advice received in respect of the FDP and any extension of the scope of cost recovery in relation to the FDP will require further statutory powers. A non-regulatory approach would not be possible for all the items for which the cost recovery is sought. In any event, even if these arrangements were possible, the operators could refuse to enter into them.

Option 3: Amend the 2013 Regulations to create a comprehensive cost recovery framework that would ensure all external advice costs relating to an operator’s FDP are borne by that operator rather than the tax payer. This is the **preferred option** and would allow all costs to be recovered in full.

Analytical Approach

13. This section sets out the estimates of the costs to new nuclear operators from amending the regulations in order to create a cost recovery framework for external advice procured for consideration of the FDP, WTC and S46 Agreement. The options analysis makes use of actual costs incurred by the Government during the negotiation process of the FDP, WTC and S46 Agreement of the Hinkley Point C (HPC) power station. These historic costs are applied to future negotiation costs given our best view over the UK's nuclear pipeline and the likely duration of the negotiations.

14. The cost ranges in the analysis reflect the uncertainty at this time about how costs may vary as the level of advice sought will depend on the number and nature of issues that are to be discussed with operators on their proposals and how quickly issues can be resolved. Our experience makes us confident that the high estimates reflect the maximum cost of advice likely to be required by Government because it was a first-of-a-kind project and we would expect experience and lessons learned to result in lower costs in future, and additionally our estimation of future costs is built upon a number of intentionally conservative assumptions. As Government gains experience of running the assessment process and increases its knowledge-base over time, it is possible that the average volume of external advice and associated costs to be recovered from industry would be reduced. We have undertaken sensitivity analysis to capture the uncertainty involved in the length of the contract negotiations.

Key Assumptions

15. The counterfactual is that the existing legislation in the 2013 Regulations remains un-amended as reflected in our 'do-nothing' option – Option 1.

16. As set out in Table 1, the WTC and Section 46 Agreement costs have not been borne by the nuclear operators previously, but would do so under the proposed changes.

17. In contrast, the costs related to advice on a FDP are already recoverable under the 2013 Regulations. The proposed regulations enable costs in respect of a FDP to be recovered at an earlier stage, i.e. at the point which an operator comes forward with proposals in relation to a FDP but before its formal submission. We expect that the vast majority of the FDP costs that can be recovered under this proposal, will consist of those that would have otherwise been incurred following formal submission of a FDP to DECC and thus recovered from the operator. Therefore additional costs to the operator resulting from amending the 2013 Regulations are expected to be very low – they mostly reflect the time value of money in bringing forward some of the work to before the formal submission date.[2]

Costs per project

18. The analysis is built up from the actual costs incurred by the Government to date in procuring advice on each aspect of the relevant waste and decommissioning arrangements. These costs have been summarised in Table 2. The figures in Table 2 are based on the actual monthly charges received by DECC from the legal, financial and technical experts that advised on the FDP together with the expert advisory board, NLFAB. The FDP figures are those incurred following formal submission of the HPC FDP as the absence of a cost recovery regime prior to formal submission meant that no costs were incurred before that point.

[2] In accordance with the HMT Green Book, the Social Discount rate of 3.5% has been used throughout this analysis.

Table 2: Historic average monthly spend from the negotiations for HPC

Financial Year	Real Figures (£k, 2015 Prices)		
	WTC	S46	FDP
2011-12	4.9	2.7	190
2012-13	11.5	7.8	208
2013-14	7.3	1.2	67
2014-15	13.0	15.3	126
2015-16	3.8	19.3	105

Note: Averages omit months in the year where no spend took place.

19. For the central estimate costs in the appraisal, we used the actual average monthly cost over the full duration of the HPC negotiations. The low/high ranges are based on the lowest/highest yearly costs incurred. Three adjustments were then made to the historic costs to inform our assessment of the expected costs of the proposed policy option:

    a. The historic figures from the WTC negotiation were reduced by 50% since we strongly anticipate a large degree of learning to have taken place from the HPC contract negotiation process. This is based on our knowledge of the WTC contract and our assessment of how much of the content is generic and is therefore relevant to, and is likely to be used by, other projects. Our view is that the HPC WTC is likely to be used as a template for negotiation with other operators, not least as it is based on the Government's published waste transfer methodology, with some 50% of the existing content remaining relevant.

    b. Only average monthly spend figures from the first two years of the FDP negotiations were used (when average monthly spend was at its highest). It was felt that the FDP costs incurred from formal submission of the FDP in March 2011 through to April 2013, when the majority of the FDP and related agreements were completed, was the most relevant period of the HPC FDP negotiations from which to draw the costs used in this RTA. The FDP negotiations that took place after this period were driven by other aspects of the HPC negotiation, such as the introduction of the Contract for Difference. We do not expect future negotiations to proceed in this way (rather that the various financial strands will be negotiated in parallel).

    c. A 20% increase in these FDP costs is applied to reflect diseconomies of scale. Given that some aspects of the HPC FDP negotiation were not wholly completed by April 2013 we have conservatively assumed a 20% cost increase for future projects. This figure tries to reflect that there may be some diseconomies of scale from extending the period during which FDP costs can be incurred but we expect these costs to be very small and, as such, 20% is intentionally conservative. In turn, we have not factored in the reduced risk of cost overruns from involving financial advisors in the negotiation of the FDP prior to its formal submission to DECC. In the contract negotiations for HPC, adviser to adviser discussions could only take place once the FDP was formally submitted and costs could be recovered under the 2013 Regulations. This delay in FDP engagement resulted in a considerable amount of additional work which we do not foresee being necessary if external advisers are able to engage at a much earlier stage in the process. Not including the reduced risk of this happening is in keeping with our intentionally conservative approach.

Number of projects/negotiations

20. The analysis is based on the negotiating costs that relate to the development of the current view of the UK's nuclear pipeline of up to five further projects in addition to the HPC project. However, both the actual number of new nuclear power stations within this pipeline of five potential projects that will ultimately be built in the UK and the timescales over which they will be deployed is uncertain. To account for this uncertainty, it is assumed that the FDP negotiations would take place under a uniform distribution of start dates between 2016 and 2024, where the expected (average) number of projects to come forward by 2035 is in accordance with nuclear deployment in DECC's long-term electricity market projections.[3]

Cost sharing (overlapping negotiations)

21. If there are two or more negotiations between operators and Government taking place at the same time it is assumed that some elements of the negotiation process can be shared. The proportion of costs that can be shared is expected to be a lot higher for the WTC, as many of the costs relate to the preparation of cost estimates and application of the pricing methodology and this work in particular will be shared across projects if they are being negotiated at the same time. There is also potential for some co-negotiating on some elements of the financial aspects of the FDP. To show that we expect there to be cost savings but are uncertain of their extent at this stage, having not had the experience of negotiating FDPs in parallel, and reflecting that they could be relatively low, there is an assumed central cost reduction percentage of around 10% for the FDP and S46 negotiations, and 20% for the WTC applied to all the concurrent projects with exception of the first project. For the low cost scenario these cost reduction values have been doubled, while for the high cost scenario we take the assumption there will be no cost sharing across concurrent projects, and therefore associated cost reduction is set at 0%.

Duration of negotiations

22. We have based estimates of the duration of future negotiations for the WTC, S46 and FDP from the past experience of HPC. The negotiation duration figures for the FDP are both shorter and more certain than those for the WTC and Section 46 Agreement. This is because the scope for FDP costs is limited to the pre-submission phase of the FDP which is more certain in its length as the operator can determine when formal submission takes place thus ending this phase of the negotiations. The duration (Years) of the negotiations is anticipated to be as set out in Table 3.

Table 3: Anticipated duration of future negotiations (years)

Scenario	WTC	S46	FDP
Low	1.5	1.5	0.5
Central	2	2	1
High	3	3	1

Source: DECC estimates based on experience with HPC FDP negotiation

23. It is assumed that the costs relating to advice on the FDP, WTC and Section 46 Agreement start to be incurred at the same time and that the price base year for the analysis is 2015. All historic costs figures used in the calculation of future costs have been rebased accordingly.

3 Any operator undertaking FDP negotiations that fall within our economic appraisal period of ten years should expect to be in commercial operation by 2035. DECC's energy and emissions projections are updated annually. The most recent version is from 2015 and is available here: https://www.gov.uk/government/collections/energy-and-emissions-projections

Appraisal period

24. An appraisal period of 10 years has been used as this is considered to capture the majority of the applicable negotiation costs for the current pipeline of nuclear power stations in the UK. The appraisal period starts in 2016 and runs until the end of 2025.

Options Assessment

25. Here we present the absolute costs involved in the negotiation process that will be liable to the operators of the nuclear pipeline in Option 3, the preferred option, which are currently incurred by the Government under existing legislative arrangements.

26. Table 4 below shows the cost of advice likely to be required by Government and subsequently recovered from industry in relation to the FDP, the WTC and the S46 Agreement contract negotiation process. The total central estimate for all three strands of the negotiation is around £1.8m over ten years. The largest cost incurred is the FDP which is just over £0.8m for ten years. The central estimate for the total equivalent annual net cost to the operators is around £0.2m.

Table 4: Estimated costs to operators over ten years, £m NPV 2015 prices

Category	Total costs to operators (£m NPV 2015)			Equivalent Annual Net Cost to Business (£m 2015)		
	Low	Central	High	Low	Central	High
WTC	0.09	0.31	0.65	0.01	0.04	0.08
S46	0.06	0.67	1.94	<0.01	0.08	0.23
FDP	0.32	0.83	0.85	0.04	0.10	0.10
Total	**0.5**	**1.8**	**3.5**	**0.06**	**0.2**	**0.4**

Note: Figures may not sum due to rounding. NPV cost to operators over the ten years of the appraisal period.

27. The low (high) cost scenario combines a low (high) monthly-cost, the low (high) duration and high (low) cost sharing assumptions. The most influential driver behind these scenarios is the duration of the negotiations, while the monthly cost and cost sharing assumptions have relatively less influence. Note that the duration for the FDP is the same in both the central and high scenarios reflecting higher certainty in the length of the pre-submission duration due to the operator having some degree of control over when they formally submit their FDP.

28. WTC and S46 costs reflect the total cost of these negotiation processes. In contrast, the FDP costs incurred after formal submission are currently recovered under the 2013 Regulations, the additional costs from the proposed changes reflect both bringing some of this work forward to before formal submission (time-value of money) and, in doing so, the potentially higher costs resulting from diseconomies of scale, as explained in paragraph 18. If there were no diseconomies of scale assumed, then the central FDP costs would only be around £0.12m NPV in total over ten years.

29. The creation of cost recovery mechanisms mean that the estimated costs to industry represent a benefit to Government of equal value £1.8m over ten years in Option 3; a likely lower value in Option 2 as a non-regulatory approach is considered unlikely to achieve full cost recovery, and; zero in Option 1 (since there is no change). At societal level, the monetised net societal impact is estimated to be zero under all options as the amendments will effectively allow a transfer of cost from Government to industry. However, the rationale for proposing this amendment is to ensure DECC is able to

undertake a robust scrutiny of the FDP, Section 46 Agreement and the WTC in order to meet the Government's objectives of ensuring that operators make prudent provision for their waste management, waste disposal and decommissioning costs and, in so doing, that the risk of recourse to public funds is remote. By aligning the full extent of government advice costs onto operators whom are best able to mitigate the risk of cost overruns, this may well lead to a more efficient outcome for society than has been possible to quantify here. For instance, by aligning the risk of cost overruns with operators we may able to receive advice sooner, over a shorter process, therefore potentially bringing down the overall cost to consumers."

Rationale and evidence that justify the level of analysis used in the RTA

30. These measures have a financial impact on prospective nuclear operators but the precise value will depend on the extent of external advice required by the Government in relation to these activities. The level of advice sought will depend on the number and nature of issues that are to be discussed with operators on their proposals and how quickly issues can be resolved. However, the duration of negotiations would be expected to reduce were more negotiations on new projects to get underway, enabling operators to build-up their FDP expertise. The cost ranges presented for the preferred option reflect the level of uncertainty at this time.

31. As explained in paragraph 18, the central estimates presented are based on actual costs incurred by the Department to date in procuring advice on each aspect of the relevant waste and decommissioning agreements. The analysis demonstrates that the additional costs to be recovered from industry under this proposal are small in relation to the overall costs of nuclear new build.

Sensitivity Analysis – significant duration overrun

32. The most influential driver of cost is the assumption of duration of negotiations. Here we consider the impact of significant duration in a down side sensitivity.

33. Past experience has shown that duration overruns are possible. However, the monthly costs tend to fall throughout the overrun because the volume of work that needs to be undertaken is considered broadly finite. It is also considered that the longer and more costly a single project might be, the less likely it is that projects at an earlier stage of development in the pipeline would come forward. This is because a project that progresses on time will create a highly attractive landscape for investment enabling other operators to bring forward their projects in the expectation that they too will progress in a timely manner. Conversely, a project suffering from costly delays will cause investors to pause slowing the timeline along which new projects are expected to develop. If we consider scenarios with both cost overruns and delays, we would thus need to in-turn revisit the probability distribution given to the likelihood of new nuclear projects coming forward – in particular higher costs and delays would imply the distribution becomes skewed towards fewer projects, offsetting some of this cost overrun.

34. As the link between the number of projects and the extent of cost overruns is not clear enough to model, we have undertaken a downside scenario based on an extreme length of contract duration (particularly as duration is the biggest driver in costs). The downside scenario shows the WTC and S46 Agreement contract negotiations doubling from 2 years to 4 years, and that the pre-submission phase of the FDP - which is much more certain in its length because the operator has a certain degree of control over it, and this is the only aspect of the FDP negotiation costs in scope of this analysis – is increased from 1 year to 1.5 years. We have kept the view of the pipeline unchanged and have shown costs sustained at the average level throughout the years to reflect

that duration overrun is not expected to result in higher overall costs (if anything lower costs for the duration overrun).

35. The cost of the downside scenario is presented in table 5 below alongside our central scenario. It shows that significant duration overruns take the central NPV cost estimate from around £1.8m over the ten year appraisal period to around £3.1m.

Table 5: Estimated costs to operators under a pessimistic negotiation scenario, £m NPV 2015 Prices

Scenario	NPV £m 2015 prices	EANDCB £m
Central	1.8	0.21
Duration Downside Scenario	3.1	0.36

Summary and preferred option with description of implementation plan

36. The preferred option is Option 3, changing legislation to allow the full cost recovery of costs incurred by Government in seeking advice as part of the negotiation process for the FDP, the WTC and S46 Agreement. The monetised net social impact of options 1-3 is estimated to be zero, yet Option 3 allows for 100% recovery of the costs involved in the negotiations. As explained in paragraph 29, the rationale for proposing this amendment is to enable DECC to undertake a robust scrutiny of the FDP and key supporting documents, in order to meet the Government's objectives of ensuring that operators make prudent provision for their waste management, waste disposal and decommissioning costs and, in so doing, that the risk of recourse to public funds is remote.

37. The proposed changes will be implemented by amending the 2013 Regulations by means of the Nuclear Decommissioning and Waste Handling (Finance and Fees) (Amendment) Regulations 2016. The number of businesses that will be affected by the legislative change is small and each is aware of the proposed changes. There is ongoing and systematic contact between DECC and these businesses and any failings in the regime would be raised rapidly. By aligning the full extent of Government advice costs onto operators whom are best able to mitigate the risk of cost overruns, this may well lead to a more efficient outcome for society than has been possible to quantify here.

Government policy

38. Passing these costs to the operator as the main party likely to benefit from an application is consistent with the HMT's policy of full cost recovery. It will result in a saving to Government and in turn the tax payer, plus the Government's ability to provide advice to the operator will not be impacted on by budgetary constraints. The measure also corrects an anomaly in the existing cost recovery regime.

One-in, Three-out status

39. The proposal to extend the FDP cost recovery regime is considered out-of-scope of the One-In-Three-Out (OITO) rule under the "Fees and Charges" exemption. The proposal will not expand the scope of regulatory activity undertaken with respect of the range of the Regulations and fees will not go beyond cost recovery. The proposal is also consistent with Government policy to move towards full cost recovery as set out in the Managing Public Money guidance.

Rationale for Triage rating

40. This measure is considered suitable for the fast-track appraisal route as the proposal as a whole is expected to be low-cost, i.e. annual gross costs to business of less than £1 million for each year (including both direct and non-direct costs and taking uncertainty into account).

Table 6: Gross annual costs under each scenario (£000s)

Scenario	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
low	82	105	105	105	25	25	25	25	25	0
central	311	400	400	400	94	94	94	94	94	0
high	594	772	772	772	178	178	178	178	135	0

Departmental signoff (*Deputy Director*): Tom Wintle Date: 4 July 2016

Economist signoff (*SCS analyst*): Paro Konar-Thakkar Date: 13/05/2016

Better Regulation Unit signoff: Christalla Kyriacou Date: 20/05/2016