

Fixed Unit Price Methodology and Updated Cost Estimates Consultation
Office for Nuclear Development
Department of Energy and Climate Change
Area 3D
3 Whitehall Place
London
SW1A 2AW

Centrica Plc
Millstream
Maidenhead Rd
Windsor
Berkshire SL4 5GD
www.centrica.com

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Dear Sirs,

Consultation on a Methodology to Determine a Fixed Unit Price for Waste Disposal and Updated Cost Estimates for Nuclear Decommissioning, Waste Management and Waste Disposal

Centrica welcomes the opportunity to respond to the above consultation. We believe that the Government's proposals outlined in this consultation help to provide clarity to new nuclear investors on the framework under which contributions to the waste & decommissioning fund will be determined. The consultation also provides additional assurance to wider stakeholders and the general public that investors will meet their full costs of decommissioning and full share of waste management costs.

We provide detailed responses to specific consultation questions below.

This non-confidential response is on behalf of the Centrica group of companies excluding Centrica Storage Ltd.

Yours sincerely,

Mark Futyan
Nuclear New Build Manager
Centrica plc

Chapter 3: The methodology to determine a Fixed Unit Price

Question 1: Do you agree or disagree that prospective operators of new nuclear power stations should be given the option to defer the setting of their Fixed Unit Price? If so, do you agree that this deferral should be limited to 10 years after the nuclear power station has commenced operation? Do you have any comments on the way the Government proposes to determine an expected Fixed Unit Price as the basis for an operator's interim provision in the event that they choose to defer the setting of their Fixed Unit Price?

We agree that prospective operators of new nuclear power stations should be given the option to defer the setting of their Fixed Unit Price. Given the early stage of development of the Geological Disposal Facility (GDF), a significant risk premium would need to be included in the fixed unit price to account for uncertainty relating to design, planning and geological conditions. Although the Government is best placed to manage that risk, in the event that the Government elects to apply a prohibitively high premium for the management of those risks, it may be in the prospective operator's interest to take an exposure to GDF development risk rather than pay the premium. It is therefore in the mutual interests of the Government and operators to maintain this option, particularly in the case of initial applications for a Fixed Unit Price for which GDF uncertainty will be greatest.

During the period between setting the eFUP and fixing the final FUP, cost estimates for waste disposal may rise as well as fall. Should cost estimates rise, the FUP will be set at a level commensurate with these revised cost estimates. As a result, the level of certainty that the share of waste disposal costs will be met in full by new build operators will be equivalent under either arrangement. There is therefore no disadvantage to the Government in offering such deferral, but a benefit in terms of flexibility to the developer.

We believe that the maximum 10 year deferral period is too short. It is likely that a significant proportion of the GDF development risks will not have been addressed in full within this window, limiting the benefit of deferral. If the maximum deferral period is set too long, there is a risk that there may be insufficient time to build up funds to the level of the final FDP (should this be higher than the eFUP). However, regular review of the eFUP and associated fund contributions, combined with sufficient years of commercial operation after fixing the final FUP would effectively mitigate this concern. To provide an example, given the design life of the two reactor designs being considered in the UK is 60 years, a 30 year maximum deferral period would still leave 30 years for contributions to be adjusted if needed. Our view is that rather than set a fixed maximum period, the deferral date should be connected with project milestones, such as planning consent being achieved.

Question 2: Do you agree or disagree with the proposal that the Schedule for the Government to take title to and liability for an operator's waste should be set in relation to the predicted end of the decommissioning of the nuclear power station? Do you have any comments on the way the Government proposes to recoup the additional costs it will incur in this case?

We agree that the Government is best placed to manage waste management and disposal costs risks over the potentially long timescales between decommissioning and ultimate disposal. It is therefore appropriate that the Government should take title and liability following the completion of decommissioning activities, subject to an appropriate risk premium to protect taxpayers.

The consultation sets out that the fixed unit price will be discounted from the estimated cost at the Assumed Disposal Date to the Transfer Date. We would welcome clarification that this same methodology will be applied to storage, encapsulation and transport costs, to be included in the lump sum payment.

Due to the long timescales involved, the discount rate applied between the Transfer Date and Disposal Date will be material to the level of contributions required into the fund. It would therefore be helpful if the specify the basis on which the discount rate will be calculated. For example, this may be a specific discount to long term Government bonds, calculated on a real post tax basis.

Question 3: Do you agree or disagree that the proposed methodology to determine a Fixed Unit Price strikes the right balance in protecting the taxpayer, by taking a prudent and conservative approach to cost estimation, while facilitating new nuclear build by providing certainty to operators? What are your reasons?

We support the proposed methodology. However, the examples provided are for illustration only and in any case provide a range, so it is difficult to conclude whether the right balance between protecting the taxpayer and facilitating new build is met. The examples provided indicate a very prudent approach which would result in an expectation of profit to the state, potentially at the expense of making new nuclear uneconomic. For example, step 15 of the worked example calculates a P95 spent fuel cost per canister of £1822 compared to a P50 (expected) cost include optimism bias of £1320. On this basis, the Government would expect to receive 70% higher income from new build operators than the cost incurred.

Question 4: Do you agree or disagree with the proposed approach to determining an operator's contribution to the fixed costs of constructing a Geological Disposal Facility? What are your reasons?

We believe it is inappropriate to apply the same high level of prudence to cost estimates relating to fixed costs as to variable costs. The argument presented in favour of applying a high risk premium to an extent that the Government would be a net beneficiary is to protect the taxpayer from the extreme downside case of 1-5% probability cost overruns. In the case of fixed costs, taxpayers are already exposed to the risk of cost overruns in this element as the facility must be constructed for the disposal of legacy wastes with or without new build wastes. A more equitable approach may therefore be to apply a P50 estimate to the out-of-model assumption analysis in respect of fixed costs. Given that P50 represents the expected costs, new build operators would still be contributing to their full share of fixed waste disposal costs.

Question 5: Do you agree or disagree with the proposal that the units to be used for the Fixed Unit Price are pence per kWh for spent fuel and cubic metres of packaged volume for intermediate level waste? What are your reasons?

We agree with the proposed units for measurement of ILW and spent fuel. In the case of ILW, the cost of disposal is closely linked to volume, so volume is the appropriate measure. In the case of spent fuel, the disposal cost will be a function of volume, burn-up and disposal route. Assuming a given disposal route, the relationship between volume and burn-up is inverse: fuel left for longer in the reactor will have a higher burn-up rate and corresponding higher heat load, but this will be offset by the saving in volume by using fuel for a longer period. Given this relationship, we believe that a measure based on output will be reflective of actual costs, independent of actual operating regime, and also provides a simple and easily measured indicator.

Chapter 5: Updated estimates of the costs for decommissioning, waste management and waste disposal

Question 6: Do the updated cost estimates represent a credible range of estimates of the likely costs for decommissioning, waste management and waste disposal for a new nuclear power station?

We believe the updated estimates provide a credible range of estimates based on early decommissioning experiences. However, we believe that experience of decommissioning in the UK and internationally over the last 20 years has delivered some key advances that mean future decommissioning and waste management will be better controlled and much less expensive. For example, technical advances such as concrete surface scrubbing and design with decommissioning in mind should reduce costs in comparison to current benchmarks.