EIR 13/0416

Question

I am writing to request that you put forward a Freedom of Information Act request on my behalf. I think the costs of nuclear waste disposal for the proposed new generation of reactors need to be made public and considered in the negotiations on going with EDF and others to build and operate reactors. Please could you submit a request for the projected costs of safe, responsible disposal of the waste to be generated by the new generation of reactors planned to be operating in the next 10-15 years. In my opinion a better decision is usually made when the full picture is clear. Current costs of clean up at over £70Bn for the past 20-30 years production must surely make a significant addition to the cost per unit of electricity. I hope you agree that the real costs of all forms of generation should be considered. After all the tax payer at present has no option but to pay for the cost of disposal.

Answer

We have considered this request in accordance with the Environmental Information Regulations 2004 (EIRs) as the information does, in our view, fall within the definition of 'environmental information' as stated in the EIR guidance. The Department of Energy and Climate Change (DECC) does hold information that falls within the scope of this request.

Cost estimates

The Government's policy is that geological disposal is the way in which higher activity radioactive waste will be managed in the long-term. The Nuclear Decommissioning Authority (NDA) is the body responsible for implementing geological disposal and the NDA regularly prepares estimates of the costs of a Geological Disposal Facility (GDF).

The NDA prepares an estimate of the cost of a GDF to support the preparation of its Annual Report and Accounts and also publishes its estimate of the costs of disposing of the waste for which it is directly responsible. In line with HM Treasury guidance the figures published in the NDA's Annual Report and Accounts are discounted. The NDA's most recent estimate of its share of the costs of a GDF, which was published in its 2011-12 Annual Report and Accounts[1], was £3.8bn.

The NDA also prepared an estimate of the cost of a GDF for the Government's National Infrastructure Plan[2], published in 2011 and updated in 2012. This was an undiscounted figure, and also included the cost of disposing of waste which is currently expected to be disposed of in the GDF but for which NDA is not financially liable, in particular the waste from the existing nuclear power stations operated by EDF Energy (formerly British Energy). This gave the lifetime cost of a GDF as £11.5bn.

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[1] NDA Annual Report and Accounts 2011-12 p28 http://www.nda.gov.uk/documents/upload/Annual-Report-and-Accounts-2011-2012.pdf

[2] http://www.hm-treasury.gov.uk/infrastructure_pipeline_data.htm

With regard to the proposed new generation of nuclear power stations, the Government expects the waste from these new nuclear power stations to be disposed of in the same GDF that will be built for the disposal of "legacy" wastes (i.e. those taken into account in the cost estimates described above). The Government's policy is that title to and liability for the waste from new nuclear power stations will transfer from the operator to the Government for disposal in the GDF on payment of the "waste transfer price".

The waste transfer price will be set at a level over and above estimated cost and include a significant risk premium to protect the taxpayer. In December 2011 the Government published its "waste transfer pricing methodology"[3], setting out how this price would be determined. This included worked examples for the calculation of the waste transfer price, which were based on cost estimates prepared by NDA to support this analysis. For this exercise, NDA provided an estimate of the fixed construction cost of a GDF, plus estimates of the variable cost of disposal per unit of waste (either spent fuel or Intermediate Level Waste (ILW)), to enable the clear identification of those costs directly attributable to the disposal of new build waste.

Although the published methodology did not calculate the total cost of a GDF covering both legacy and new build wastes, it contained all the information necessary to make such a calculation. The figures in the methodology produce an estimate of the cost of a GDF incorporating waste from a fleet of new nuclear power stations of £14.3bn. This is an undiscounted number, calculated in September 2008 money values.

The most recent cost estimate DECC holds was prepared for DECC by NDA, to support discussions between DECC and NNB Genco on the terms of a possible waste transfer contract covering the spent fuel and ILW arising from the proposed new nuclear power station at Hinkley Point C. This estimate has not yet been published, although we envisage it being published in due course, but is being disclosed in response to this request.

This is an estimate of the cost of a GDF, based on the NDA's current reference design, sized to hold the "legacy" inventory (as was used for the purposes of calculating the GDF cost estimates discussed above) plus the estimated waste arising from a fleet new nuclear power stations with total capacity of 16 GW(e). This corresponds with the declared intentions of the three new nuclear consortia.

The estimate, in September 2012 undiscounted money values , was for a total GDF project cost of £15.4bn. Of this cost, the element arising from the inclusion in the project of the ILW and spent fuel from a 16GW fleet of new nuclear power stations was £4.1bn. Hence the "legacy" element of this latest estimate is £11.3bn, a slight revision to the £11.5bn figure in the National Infrastructure Plan.

The main differences between the figures derived from the December 2011 Methodology and these latest numbers are updated assumptions around the

[3] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/42629/3798-waste-transfer-pricing-methodology.pdf

quantities of waste for disposal, as these are kept under regular review, and small adjustments for inflation.