

Respondent Details	
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Organisation:	Rolls-Royce

<input type="checkbox"/>	Business representative organisation/trade body
<input type="checkbox"/>	Central Government
<input type="checkbox"/>	Charity or social enterprise
<input type="checkbox"/>	Individual
<input checked="" type="checkbox"/>	Large business ( over 250 staff)
<input type="checkbox"/>	Legal representative
<input type="checkbox"/>	Local Government
<input type="checkbox"/>	Medium business (50 to 250 staff)
<input type="checkbox"/>	Micro business (up to 9 staff)
<input type="checkbox"/>	Small business (10 to 49 staff)
<input type="checkbox"/>	Trade union or staff association
<input type="checkbox"/>	Other (please describe):

Thank you for taking the time to let us have your views.

The Government does not intend to acknowledge receipt of individual responses unless you tick the box. ✓

The consultation document sets out the Government's proposed approach to the longer term management of the UK's plutonium stocks for public scrutiny and consultation. Comments on any aspect of this issue are welcome, but the key questions posed in this consultation are:

No	Question
Q1	Do you agree that it is not realistic for the Government to wait until fast breeder reactor technology is commercially available before taking a decision on how to manage plutonium stocks?
Response	<p>Yes.</p> <p>The challenge of setting out a strategy for the long-term Management of the UK's plutonium stocks exists now and industry needs early clarity on the proposed way forward.</p> <p>Fast breeder reactor technology on a commercial scale remains some years away, however, we believe that with appropriate support through research and development, the technology could be commercially-viable in the medium-term.</p> <p>Therefore to wait means that the current storage option, which in all practical terms is the "do nothing" option, prevails.</p>
Q2	Do you agree that the Government has got to the point where a strategic sift of the options can be taken?
Response	<p>Yes. There are three viable options for the management of plutonium that could be deployed in the short-term: continued storage; manufacture into MOX fuel; and immobilisation. All three options are well understood and the likelihood of any emergent new information or options is low. On that basis, there appears no benefit in delaying any strategic sift of options by Government.</p>
Q3	Are the conditions that a preferred option must in due course meet, the right ones?
Response	<p>We agree that any option must be affordable, deliverable and present value for money for the UK taxpayer. The option must also be safe, secure and result in any product (fuel, waste etc) being left in a proliferation resistant form.</p> <p>Large capital investment will be needed in order to build, for example, a facility to manufacture MOX fuel. In order to deliver value for money for the UK taxpayer, it may be desirable for the project to attract private investment and this must be considered as a subset of the value for money criteria. The project must also be attractive for potential operators, who will bring the right particular skills, knowledge and experience in operating these complex fuel manufacturing plants.</p>
Q4	Is the Government doing the right thing by taking a preliminary policy view and setting out a strategic direction in this area now?

Response	<p>Yes. We strongly agree that industry needs early clarity on the likely policy intentions of Government in this regard.</p> <p>A long-term solution is required and it is likely that significant investments will have to be made by both Government and the private sector. To facilitate this, the private sector needs time to develop its business plans and investment cases to enable confirmation of its involvement at an early stage. Otherwise potential options, such as the manufacture of MOX fuel, will be closed by default or Government will have to fund in its entirety.</p> <p>Additionally, the market will not commit to this involvement unless there is a clear signal from Government about its policy and the opportunity to align its own strategies and plans with prevailing Government policies. This situation is exacerbated because the investment and payback periods of these types of plants far exceed the likely span of any Government.</p>
Q5	Is there any other evidence government should consider in coming to a preliminary view?
Response	<p>Oxford University's Smith School of Enterprise and the Environment (SSEE) published a report in March 2011 entitled "A low carbon future: Economic assessment of nuclear materials and spent nuclear fuel management in the UK." This report is an important input into the debate on options for the future options for the UK's plutonium stocks.</p> <p>The report, which was independently produced by SSEE was partially joint funded by AREVA and Rolls-Royce, presents inter alia a number of costed options for the manufacture of MOX fuel using the UK's stockpile as feed. The study also identified issues and sensitivities which need to be considered in parallel with the associated costs of MOX manufacture. Significantly, the report calls for a holistic view to be taken of the structure of the UK nuclear industry which has, in recent years, been structured only to address the effective rundown, rather than any new-build and renaissance in the UK.</p>
Q6	Has the Government selected the right preliminary view?
Response	<p>Yes. We believe that to take the preliminary view that the UK's plutonium stocks should be manufactured into MOX fuel is the right one.</p> <p>There are three viable options: continued storage, manufacture into MOX fuel and immobilisation.</p> <p>Continued storage is essentially a "do nothing" strategy by default and in any case does not represent a final solution for the management of the UK's plutonium stock.</p> <p>Immobilisation of the plutonium in, say, concrete has not been</p>

	<p>sufficiently developed into an industrial scale solution of the capacity to deal with the quantity of material stored in the UK. In our opinion the volume of waste material generated would be very large and would therefore add significant cost to any deep geological facility in which it must be stored.</p> <p>MOX fuel fabrication is a proven technology with plants currently operating that are capable of manufacturing 140t of MOX fuel per year, and in the process, consuming around 7 tonne per year (assuming MOX fuel contains around 5% plutonium). Furthermore, there are currently around 40 reactors worldwide currently licensed to burn MOX fuel and so, unlike the other possible solutions, there is no technical reason why the UK's plutonium stock cannot be manufactured into MOX fuel and burned in reactors.</p>
Q7	Are there any other high-level options that the Government should consider for long-term management of plutonium?
Response	No. The only three viable options are continued storage, manufacture into MOX fuel and immobilisation.