Respondent Details	
Name:	Dr David Horsley FREng, CEng, FIChemE

Please select the category below which best describes who you are responding on behalf of.

☐	Business representative organisation/trade body
☐	Central Government
☐	Charity or social enterprise
☐	**Individual**
☐	Large business (over 250 staff)
☐	Legal representative
☐	Local Government
☐	Medium business (50 to 250 staff)
☐	Micro business (up to 9 staff)
☐	Small business (10 to 49 staff)
☐	Trade union or staff association
☐	I am a former member of the Nuclear Safety Advisory Committee (NuSAC)

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	I agree, decisions need to be taken before Fast Reactors are commercially available. However, that is not to say that fast reactors should be in any way dismissed. The UK plutonium stock should be viewed as a strategic resource to prime a future fast reactor programme (supported long-term by the large UK reserves of depleted uranium). The plutonium reserve held as irradiated MOX fuel can still be recovered and used as fast reactor fuel ("burning" of MOX fuel consumes little Pu, although the isotopic mix is changed).
Q2	Do you agree that the Government has got to the point where a strategic sift of the options can be taken?
Response	Yes
Q3	Are the conditions that a preferred option must in due course meet, the right ones?
Response	See my answer to question 1. Irradiated MOX fuel contains plutonium that can fuel fast reactors and, therefore, the plan should not be to dispose of the irradiated MOX fuel.
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	Yes but in the long-term interests of the UK, plans should include support to fast reactor development in Europe or elsewhere.
Q5	Is there any other evidence government should consider in coming to a preliminary view?
Response	The dismissive attitude to fast reactors "always 30 years away" is very short-sighted. Fast reactor technology can be made to work and the development of a commercial fast reactor is more a matter of will than

	any fundamental technical challenge. The problems with the Dounreay prototype fast reactor were not with the reactor and its nuclear physics but with the steam raising plant that, in hindsight, was almost certain to experience the problems it did. When the decision to stop work on the fast reactor at Dounreay was taken, it was probably fair to state that “fast reactors were unlikely to prove economically viable in the foreseeable future”. However, the current volatility and steady upward movement of energy prices and the political unrest in the Middle Eastern oil producing countries make the relatively early viability of fast reactor electricity generation wholly credible. In the interests of its long term energy security, the UK should seek to take a major collaborative stake in the fast reactor development programmes of France and / or Japan.
Q6	Has the Government selected the right preliminary view?
Response	I agree that the UK should not be disposing of its Pu as waste and that MOX fuel may be the appropriate form in which to return Pu owned by other countries. However, I believe that the UK owned Pu is a very valuable strategic fuel reserve and any decision to use it or otherwise dispose of it cheaply in the near future would greatly disadvantage future generations.
Q7	Are there any other high level options that the Government should consider for long-term management of plutonium?
Response	Serious involvement in fast breeder reactor development should not have been abandoned and re-entry (as a full participant) into such a development programme is long overdue. As part of a strategic plan to develop a commercial fast reactor programme, it is essential to establish how much Pu is required for the initial fuel charge of enough reactors to form a realistic nucleus of a “fast reactor fleet”. In this context, the so called UK “plutonium mountain” is unlikely to prove excessive.