

Dear Sirs

Response to the Consultation on Management of the UK's Plutonium Stocks

Thank you for providing SEPA with the opportunity to respond to the consultation on the long-term management of the UK's separated civil plutonium.

Our response to this consultation takes into account SEPA's recent Energy Position Statement which includes five statements; ordered according to their position in an energy hierarchy, and are aimed at guiding energy decision making towards more sustainable options. Full details can be found at:

http://stir-ser-net01/cms/uploadedFiles/639_Energy%20statement_final.pdf

SEPA notes the UK Government's preliminary policy preference is for reusing plutonium either in the UK, or overseas, as a source of Mixed Oxide Nuclear Fuel (MOX) on the basis that it offers the best prospect to deliver a solution for long-term plutonium management.

Reuse of Plutonium as a Source of MOX Fuel

Our response to this policy preference takes account of our Position Statement on the Sustainability of Renewable Energy Generation which advocates that:

Nuclear energy is an intermediate technology that uses non-renewable fuels to generate energy with lower carbon emissions. Uranium is carbon intensive and finite and there are outstanding concerns regarding the other environmental consequences of nuclear energy.

Therefore, SEPA believes the use of MOX fuel for nuclear power to be a low carbon but non-renewable fuel source.

Response to Question 1 in the Consultation Document

Given that the plutonium already exists, SEPA is of the view that reusing plutonium as MOX fuel would avoid plutonium having to be managed as radioactive waste and presents an opportunity to apply the waste management hierarchy and utilise the energy potential of plutonium. This approach draws parallels with Scotland's Zero Waste Plan to make best practical use of the waste management hierarchy and look to solutions that maximise the reuse, recycling and recovery of resources. In addition, the policy preference to convert plutonium into MOX fuel addresses the potential proliferation issues associated with the long-term storage of plutonium. Thus, SEPA agrees that decisions how to manage plutonium stocks are needed now and it is not realistic for UK Government to hold off on such decisions until fast breeder reactor technology is commercially available which could be many years in the future and does not accord with the principle of intergenerational equity.

SEPA works to support delivery of Scottish Government policies relating to nuclear energy. The most recent view from the Scottish Ministers was set out in its Draft

Electricity Generation Statement in November 2010 which says: *“A huge increase in the potential of renewable electricity has led to a downward revision in the estimated requirement for new build thermal electricity generation plant and reinforced the policy against new nuclear capacity in Scotland. By 2030 fitting full CCS to either upgraded or replacement thermal plant and maintaining a minimum thermal electricity capacity of above 2.5GW would satisfy security of supply concerns and would be consistent with a long term path towards decarbonisation. As a result of renewable generation ambitions and interconnection upgrades, there is no current need for an increase in overall thermal capacity.”*

Therefore, it is unlikely that proposals (made under Section 36 of the Electricity Act 1989) to use MOX fuel in new nuclear power plants in Scotland would be supported by the Scottish Government. In addition, there are no nuclear power stations currently operating in Scotland that would be suitable to use MOX as a source of fuel. Therefore, we have concluded that reuse of Plutonium as a source of MOX fuel is unlikely for either current or new nuclear power stations in Scotland given (i) that current nuclear reactors would not be suitable to use MOX fuel and (ii) the Scottish Government current policy position against new nuclear build.

Disposal of Spent Fuel in Scotland

SEPA notes the consultation states that *“after use as fuel in nuclear reactors, spent fuel is left in a state where it can be prepared for permanent disposal”*. Scotland's Higher Activity Radioactive Waste Policy 2011 makes it clear that spent nuclear fuel falls outside the scope of the policy. When issuing the policy, the Scottish Government reaffirmed its position that it does not support deep geological disposal of radioactive waste. Thus, any plans for permanent disposal of spent fuel in Scotland would necessitate a policy change.

If plutonium was to be subject to long-term storage or immobilised and then disposed of as radioactive waste, SEPA is of the view that our regulatory framework for the accumulation and disposal of radioactive wastes will protect both the environment and human health. Also, SEPA will continue its work with other nuclear site regulators to ensure that storage and disposal of radioactive waste at nuclear sites is subject to robust regulation as set out in Position Statement 4 in SEPA's Energy Position Statement on Storage and Disposal of Radioactive Wastes.

As a public body committed to openness and transparency, SEPA feels it is appropriate that this response be placed on the public record.

If you require further clarification on any comments raised in this response, please contact Jim Cochrane, Principal Policy Officer, Radioactive Substances Policy Unit, at the address shown.

Yours faithfully

Janice Milne

Head of Operations