The UK has safely and securely managed its plutonium stockpiles over many decades. On completion of reprocessing operations within the next few years, the UK will be home to 140 tonnes of civil separated plutonium.

In its 2016 strategy document the Nuclear Decommissioning Authority stated ‘the priority for UK Government is to provide a solution that puts UK-owned plutonium beyond reach’. The NIA wants to see Government take action now to move this forward.

Reusing plutonium in nuclear plants would enable the UK to safely and securely manage its stockpile, whilst setting a global example in managing plutonium responsibly. These actions would contribute to national security by placing the plutonium into an irreversibly safe and proliferation-resistant state, whilst potentially providing low-carbon energy to the grid; helping to meet the UK carbon reduction targets and security of supply goals.

CURRENT POSITION

The Government and the Nuclear Decommissioning Authority (NDA) are looking at three credible reuse options, as set out in the 2014 report. A further NDA report is expected to be published in 2016:

**MOX - AREVA**

AREVA offers a MOX (mixed oxide) fabrication facility. Since producing MOX fuel, AREVA has reprocessed more than 13,000 tonnes of used fuel at La Hague in France, and recycled 130 tonnes of plutonium into MOX.

**CANDU 6 (EC6)**

The Candu Energy Inc reactor is a 700 MWe class heavy-water pressure tube reactor target, with a design life up to 60 years. It is suitable for small and medium sized electric grids.

**PRISM - GE Hitachi**

Owned by GE Hitachi. A plant requires two PRISM reactors with a combined output of 622MWe. PRISM is a high energy neutron (fast) reactor, based on more than 30 years of development.
Provision has been made in the NDA’s budget to undertake further work on these options.

The Government and NDA continue to focus on hazard reduction at Sellafield which includes addressing the legacy facilities. Putting the plutonium beyond use will take many decades, so it is important to ensure it is stored in modern facilities that are safe and secure.

The UK led the way on developing the world’s civil nuclear industry, and I expect us to continue leading the way in dealing with our nuclear legacy, too. For that reason managing our civil plutonium inventory remains a Government priority.

Andrea Leadsom MP
former Energy Minister, Westminster Hall Debate, July 2016

REUSING PLUTONIUM WOULD:

- Turn plutonium from a cost liability into an economic asset
- Enhance energy security through low carbon power generation
- Maintain high value jobs and skills across generations
- Secure investment into Cumbria and across the wider UK nuclear industry
- Set a global example in managing plutonium responsibly
- Support the international campaign to reduce the risks of proliferation

WHAT CHALLENGES EXIST?

- The NDA has stated significant further work must be undertaken to understand the technologies proposed for reuse before a decision can be made
- The Office for Nuclear Regulation needs to be supported and resourced to enable early licensing engagement
- Cross party support is essential to proceed with any management programme, as it will cross multiple-administrations

WHAT DOES THE NIA WANT TO SEE NEXT?

- Government must commit to, and develop a policy for reuse during this Parliament
- The NDA and Government should make a decision on which technology to use and a timetable for implementation should be published