

Meeting: Nuleaf Steering Group
Date: 7th September 2023
Item: 5
Subject: Updates on national developments in radioactive waste management
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Introduction:

This paper updates members on recent developments in radioactive waste management and NDA operations. It covers:

- NDA Group update;
- UK Government update;
- International news;
- Regulatory news;
- Nuleaf update; and
- Cllr. David Southward.

Recommendation:

This paper is for noting.

1. NDA Group update

1.1 Nuleaf and Cumberland Council attended the **Integrated Waste Management (IWM) Forum** in Manchester on the 20th June. Along with presentations from Nuleaf and regulators the meeting heard updates from a range of partners.

The **Nuclear Decommissioning Authority (NDA)** reported that they have undertaken a Storage Strategy Review with this work now at the implementation phase. The review looked at the optimal approach to storage taking into account the expanded responsibilities for AGR decommissioning. This is likely to lead to new waste streams being assigned to existing stores and to the development of additional waste stores. There are also implications for the transportation of waste.

NDA is looking at a unified approach to waste packaging. The cost of packaging is estimated at almost £6Bn across the NDA mission and so

anything that ensures greater standardisation has the potential to save significant sums.

The **Department of Energy Security and Net Zero (DESNZ)** reported that they had received almost 200 responses to their recent decommissioning and radioactive waste policy consultation. The Department is working through these and will publish a response to all the points raised in due course. This will then lead to the publication of the final policy, but they cannot give a date for when this may be.

The **Environment Agency (EA)** is updating the Guidance on Requirements for Authorisation (GRA) that supports the solid waste destined for the GDF and Near Surface Disposal (NSD). They plan a consultation in early 2024. Nuleaf is in dialogue with the EA about holding a session on this consultation at our Radioactive Waste Planning Group (RWPG).

EDF spoke about the waste aspects of their new nuclear build programme. They expect the first waste to arise at Hinkley C in around 2028 and at Sizewell in the mid-2030s.

Rolls Royce highlighted the challenges of recruiting skilled workers and the launch of their Skills Academy that will train 200 apprentices per year for the next decade. The company is also planning an expansion of their production of submarine reactors following the signing of the AUKUS agreement between the UK, USA and Australia.

1.2. Magnox have marked the 75th anniversary of the opening of the oldest large reactor in Europe, the **British Experimental Pile Operation (BEPO)** on the Harwell site¹. BEPO was initially used to make plutonium but subsequently became a research reactor, producing radioactive isotopes for medical purposes. It also helped the study of the performance of the reactor core and cooling systems that were used in the Magnox and advanced gas cooled reactors.

Eleven research reactors on the Harwell site have already been decommissioned and cleared. Planning for the dismantling of the BEPO reactor is underway.

1.3 It has been announced that **Westinghouse Environmental Services**, part of the Westinghouse Group, will open a decommissioning hub at Menai Science Park on Anglesey². This will create 15 jobs initially but there are plans for expansion in future.

A spokesperson for Westinghouse commented *'As part of our futures strategy, Westinghouse has selected North Wales due to its vast nuclear capability and capacity relating to the proximity of Wylfa and Trawsfynydd Power stations. We*

¹¹ [Magnox BEPO reactor 75th Anniversary - GOV.UK \(www.gov.uk\)](https://www.gov.uk)

² [US nuclear giant to open new offices on Anglesey - North Wales Live \(dailypost.co.uk\)](https://www.dailypost.co.uk)

want to tap into this capability to invest, grow and develop specific nuclear decommissioning solutions to the NDA's objectives in the UK.'

1.4 Martin Chown has left his post as CEO of Sellafield to take up a new role in the private sector. He has been replaced on an interim basis by Euan Hutton. Mr Hutton was previously the Chief Nuclear Officer at the site.

1.5 Nuleaf's Director met Dr. Frank Wigley of the NDA on the 23rd August to discuss NDA work on land use and waste planning. The key points of the meeting were that:

- The NDA is looking at the issues around Permitted Development Rights (PDR) for nuclear decommissioning, building on discussion with their Town and Country Planning Group and Nuleaf. They would like to test their thinking with Nuleaf. It is hoped to have a discussion on this topic at the next Radioactive Waste Planning Group (RWPG) on the 31st October.
- In parallel to this, the UK Government is considering whether there is any benefit to establishing specific PDRs for nuclear decommissioning.
- Magnox are continuing to develop their thinking around the development of Masterplans for sites. These would help support decommissioning and end state strategies and determine the impacts on land use and when key activities might happen. At an appropriate stage they will look to test this with the RWPG, particularly in relation to the links with Local Plans. This is likely to be in 2024/25.
- A near final version of a discussion guide for on-site disposal has been prepared. This document, formerly known as the National Narrative, will be put out for comment soon to stakeholders including Nuleaf. It is intended to then publish it online as an accessible guide, with links to information if people want to consider these issues in more detail.
- It is proposed that an annual meeting be held between the NDA's Town and Country Planning Group (NIGLQ-P) and Nuleaf's RWPG. The next meeting may take place as part of the RWPG planned for January/February 2024.

2. UK Government update

2.1 **Great British Nuclear (GBN)** was launched on July 18th with a remit to drive the rapid expansion of nuclear power within England and Wales³. It is an 'executive non-departmental public body' sponsored by the UK Department of Energy Security and Net Zero (DESNZ).

Its first act was to open a tender process for partners to support the development of Small Nuclear Reactors (SMRs)⁴. The indicative value of this is £20 Billion over 15 and a half years, with partners supporting design, development, manufacturing, supply, installation and commissioning of products. The deadline for tenders was August 23rd.

³ [British nuclear revival to move towards energy independence - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/british-nuclear-revival-to-move-towards-energy-independence)

⁴ [New nuclear body launches £20bn tender for SMR technical partners | New Civil Engineer](https://www.newcivilengineer.com/news/new-nuclear-body-launches-20bn-tender-for-smr-technical-partners/)

Current SMR projects include Rolls-Royce proposals for SMRs at Berkeley and Oldbury and Balfour Beatty/Holtec plans for a light water SMR somewhere in the UK.

David Peattie, Nuclear Decommissioning Authority CEO, commented that decommissioning plays a critical role in the lifecycle of nuclear power generation, *'and we are committed to sharing our expertise, resource, and assets to support GBN and the government in delivering for the British public'*.

2.2 The House of Lords library has published a short paper on **The role of nuclear in the UK's energy mix**⁵. It offers some context for a debate that is being held on the same day as this Steering Group meeting.

2.3 The Department of Energy Security and Net Zero, along with the Ministry of Defence and the Health and Safety Executive, is conducting a post implementation review of the **Radiation (Emergency Preparedness and Public Information) Regulations 2019 (REPPIR)**. Anyone interested in responding can do so online by the 24th September⁶.

2.4 The UK Government has launched its **Nuclear Skills Taskforce**⁷, with Sir Simon Bollom appointed Chair. The aim is to bring together Government, employers and academia to support the growth of skills opportunities in the sector. The taskforce will cover decommissioning and new nuclear as well as defence.

3. International news

3.1 **Sweden** has lifted its ban on Uranium mining and committed to plans for at least 10 new nuclear reactors in the next 20 years⁸. This marks a major reversal of policy, with a decision taken in 1980 to phase out all nuclear plants. Sweden accounts for 80% of EU Uranium deposits and the move follows concerns about Russian domination of Uranium processing.

3.2 **Terra Power**, backed by Bill Gates, has stated that it hopes to build dozens of Small Modular Reactors in the UK and that it is bidding for approval for its design from GBN⁹. They have developed a design for a sodium reactor with an output of 345MW. It is claimed it has a degree of flexibility in terms of storage that is present in conventional reactors. A demonstration plant is under development in Wyoming with this due to be operational by the end of this decade.

⁵ [The role of nuclear in the UK's energy supply - House of Lords Library \(parliament.uk\)](#)

⁶ [Radiation \(Emergency Preparedness and Public Information\) Regulations 2019 – Post Implementation Review - Department for Business, Energy and Industrial Strategy - Citizen Space](#)

⁷ [New Taskforce to build UK nuclear skills - GOV.UK \(www.gov.uk\)](#)

⁸ [Sweden to lift parliamentary ban on uranium mining \(power-technology.com\)](#)

⁹ [Bill Gates-backed nuclear contender Terra Power aims to build dozens of UK reactors - CityAM](#)

3.3 On the 24th August, Japan began releasing treated radioactive water from the **Fukushima nuclear plant** into the Pacific Ocean¹⁰. This water was used to cool the plant's reactors when they went into meltdown in 2011, and millions of tonnes are currently stored on site. The International Atomic Energy Agency (IAEA), the United Nation's nuclear regulator, has approved the plan as safe and having 'negligible' impacts on humans and the environment. The water has been diluted to reduce radioactivity to 1,500 Bequerels per litre, well below the safe limit for drinking water.

There have been vocal protests by fisherman and members of the public in Japan and South Korea. China has condemned the move and imposed a ban of all seafood from Japan. Three more scheduled releases will take place by March 2024, with the whole process taking at least 30 years.

4. Regulatory news

4.1 The Office for Nuclear Regulation (ONR) has published its **Corporate Plan 23/24**. This sets out how the regulator intends to deliver effective and consistent regulation¹¹.

4.2 The ONR has issued an enforcement notice on Magnox for a breach of the Dounreay nuclear site licence¹². The issue of concern relates to the storage of sodium, used to cool the reactor, in drums on site. The regulator concluded that storage arrangements do not comply with good practice.

5. Nuleaf update

5.1 Chloe Atkinson began work as Nuleaf's Director's Assistant in early July. She will work part time, usually over Tuesday to Thursday and provide administrative support. Nuleaf is delighted to welcome Chloe, and members will be able to meet her at this meeting and Annual Gathering.

A recruitment process was also undertaken for a part time Senior Policy Advisor role. Following interviews, it was not felt that a suitable candidate had been identified. Alternative policy support for the organisation has been identified and discussions are ongoing to finalise this.

¹⁰ [The science behind the Fukushima waste water release - BBC News](#)

¹¹ [ONR Corporate Plan](#)

¹² [Dounreay inspectors raise further red flag about sodium storage \(johnogroat-journal.co.uk\)](#)

5.2 As part of the June Steering Group meeting, a highly successful and well attended session on **Advanced Modular Reactors (AMRs)** was held, involving DESNZ, the National Nuclear Laboratory (NNL), Committee on Radioactive Waste Management (CoRWM), Office for Nuclear Regulation (ONR) and Nuclear Free Local Authorities (NFLA). A minute of the meeting has been circulated with the Steering Group papers and will be placed on the Nuleaf website.

6. Cllr. David Southward

6.1 Cllr. David Southward passed away on the 16th June. David was a long standing and regular attendee at Nuleaf meetings and also active on behalf of Cumbria County Council in a range of work on nuclear and the energy sector. Our thoughts and best wishes are with his family, colleagues and friends.