

**Meeting:** Nuleaf Steering Group  
**Date:** 15<sup>th</sup> September 2022  
**Item:** 4  
**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;
- Sellafield News;
- UK Government update;
- Decommissioning of the AGR Stations;
- Regulators update;
- Nuleaf news; and
- International news.

## Recommendation:

This paper is for noting.

### 1. NDA Group update

1.1 The NDA published its **Annual Report and Accounts 21/22** on the 14<sup>th</sup> July. The document reflects on the restructuring of the NDA Group and highlights achievements including the removal of the diffuser at the Windscale Pile Chimney and the transfer of the first active waste package to the new interim storage facility at Chapelcross. It can be read here<sup>1</sup>.

NDA has also announced the appointment of Kathryn Cairns to the Group Board. Kathryn has an accountancy background and will chair the Audit, Risk and Assurance Committee<sup>2</sup>.

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<sup>1</sup> <https://www.gov.uk/government/publications/nuclear-decommissioning-authority-annual-report-and-accounts-2021-to-2022>

<sup>2</sup> [https://www.gov.uk/government/news/kathryn-cearns-obe-joins-nda-board-as-a-non-executive-board-member?utm\\_medium=email&utm\\_campaign=govuk-notifications-topic&utm\\_source=142257fb-b039-48fb-bdb1-37ceeb5ec1b0&utm\\_content=immediately](https://www.gov.uk/government/news/kathryn-cearns-obe-joins-nda-board-as-a-non-executive-board-member?utm_medium=email&utm_campaign=govuk-notifications-topic&utm_source=142257fb-b039-48fb-bdb1-37ceeb5ec1b0&utm_content=immediately)

1.2 **Nuclear Waste Services (NWS)** has published as annual review<sup>3</sup>. It sets out plans for the coming years and highlights what the organisation sees as its successes over the last 12 months. These include:

- An outstanding safety record – with zero reportable incidents at the LLW Repository Site.
- Real progress in the search for a suitable site and a willing community for a Geological Disposal Facility (GDF) – with four search areas and community engagement in different parts of the country.
- Achieving multi-million pound savings through innovative management of nuclear waste, such as the treatment of plutonium-contaminated materials.

1.3 Nuleaf planning officers met with NDA on the 20<sup>th</sup> June to discuss the new **Nuclear Industry Group for Land Quality – Planning (NIGLQ-P)** and developing work by NDA around land use and waste planning. The meeting was well attended by RWPG members.

NIGLQ-P includes members of each of the NDA Group companies and will be expanded to involve EDF and AWE. They have an interest in direct engagement with Nuleaf members and a joint meeting between NIGLQ-P and the RWPG has been arranged for the 8<sup>th</sup> November.

1.4 Nuleaf's Executive Director, along with Jonathan Cook of Copeland Borough Council, attended an online **Integrated Waste Management (IWM)** Theme Overview Group (TOG) on the 23<sup>rd</sup> June. The meeting included the following updates:

**Metallic Waste Treatment Strategy** The NDA has a significant volume of radioactive and non-radioactive metallic waste that it needs to treat, with an estimated cost of £3-4Bn to complete this process. An Optioneering exercise is being undertaken to consider the future management of metallic wastes with the aim of promoting the circular economy and reducing costs. This may include the development of enhanced UK capacity, but greater clarity will be provided once the options have been assessed more fully.

**Integrated Waste Implementation Plan (IWIPs)** NDA is developing IWIPs for each site and has issued Guidance on the content and format of these<sup>4</sup> documents, which will replace Integrated Waste Strategies (IWS). The aim is that the IWIP will facilitate better waste management at both a site level and across the NDA estate and:

- Ensure there is a clear link between Government policies, NDA and site waste strategies, and the implementation of site waste management plans.

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<sup>3</sup> <https://www.gov.uk/government/publications/nuclear-waste-services-annual-review-2021-22>

<sup>4</sup> <https://www.gov.uk/government/publications/eng01-specification-and-guidance-for-an-integrated-waste-strategy>

- It will enable the development of each to be influenced by the others in a flow of information between relevant stakeholders and authorities;
- Enable a clearer demonstration of how NDA Strategy is being implemented;
  - Provide NDA and Government with clear up-to-date information upon the current position regarding waste management across the NDA estate;
  - Act as a coherent, transparent strategic stakeholder communication tool;
  - Inform NDA IWM Strategy, and better coordinate waste management activities and plans across the estate.

**Strategic Review of the non-radiological waste inventory.** NDA are launching this project shortly which will run to December. It will have a main aim of addressing the issues around non-radioactive wastes which are significantly greater in volume than the radioactive wastes that the NDA will generate. A conventional waste group will be established within NDA to help take forward this work with an overall aim that by 2035 there will be zero waste to landfill. Nuleaf's Executive Director and a number of Radioactive Waste Planning Group members have been invited to take part in an NDA meeting on the Review, due to be held on the 14<sup>th</sup> September. A report on this will be provided to Steering Group.

Nuleaf's Director also participated in a **Critical Enablers TOG** on the 1<sup>st</sup> July. This included:

A presentation from Jacq Longrigg on people and skills. Jacq reported on the completion of a Beacon Project on the **NDA Leadership Academy and Group Talent** and on plans for a **Beacon on Skills** in 2022/23. The targets for the Skills Beacon include:

- Production of a medium-term strategic workforce plan with a focus on cyber skills.
- Development of a group wide graduate development programme and campaign.

A session on plans for the development of an **NDA Group Energy Strategy**. This will consider how the Group and sites will reduce consumption and generate low carbon energy in future.

An update from Jamie Reed on the NDA's work on **socio-economics and social value**. He noted that NDA has completed new Economic Impact Assessments for the estate. Three studies have been undertaken, covering West Cumbria, Magnox and Dounreay. Nuleaf has invited Jamie to give a presentation on these reports to a future meeting and will circulate the studies when available. NDA is also planning to present the reports to Site Stakeholder Groups.

1.5 As reported to previous Nuleaf meetings, the NDA is in the process of revising the **Lifetime Plans (LTPs)** for the Magnox sites to reflect recent thinking on the order and speed of decommissioning. It is understood that the Business Case to release the funding required is with Government. However, no decision will be taken until the new BEIS Ministerial team is in place, following the selection of Liz Truss as Prime Minister.

1.6 **Copeland Borough Council** has voted to submit a bid to the UK Government's Levelling Up Fund to support the development of an **Industrial Solutions Hub (iSH)** at Cleator Moor. The development aims to create more than 700 jobs along with skills and training opportunities in clean energy and nuclear decommissioning. The plan is also backed by the NDA, with Government funding accompanied by £7 million from the Nuclear Decommissioning Authority's Socio-Economic Fund and £2.3 million from Sellafield's Social Impact Fund.

Jamie Reed, NDA director of socio-economics, commented *'The NDA and Sellafield Ltd have worked with local partners over recent years to bring these ideas forward and to ensure that the Industrial Solutions Hub has reached this point. This is part of a series of socio-economic projects we have collectively helped to fund over recent years including Campus Whitehaven, the Bus Station and more. Our socio-economic agenda is an important part of our legacy as we continue to make progress against our decommissioning mission and we're committed to working with local partners to co-create future projects that help to strengthen and diversify the local economy.'*

Cllr David Moore, Nuclear Portfolio holder at Copeland Borough Council and Nuleaf Chair, stated *'When we look at the Industrial Solutions Hub...it's not just local, it has international and national permutations...as the nuclear industry at Sellafield starts to complete its clean-up work, we'll need to look at international markets where we're going to expand and bring in that new skill base.'*

1.7 Local development company Cwmni Eginio has stated its ambition for **Trawsfynydd** to be the site of the UK's first Small Modular Reactor (SMR) with a target date of 2027 for construction to begin. This follows the announcement that the NDA and Cwmni Eginio will work together on proposals for the siting of a new nuclear development at the decommissioning site<sup>5</sup>.

Cwmni Eginio chief executive, Alan Raymant, commented *'As well as helping to meet energy demands and Net Zero targets, we have an exciting opportunity at Trawsfynydd to deliver lasting benefits to local communities, as well as promote the supply chain, skills development and socio-economic growth in the wider North*

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<sup>5</sup><https://www.insidermedia.com/news/wales/cwmni-eginio-set-for-crucial-role-on-trawsfynydd-site>

*Wales region and beyond. Our focus will remain heavily on delivering these benefits as we develop the business case for investment and progress the development.'*

Local anti-nuclear group PAWB has called for the Welsh Government to withdraw its support for the proposal and target investment in renewable energy instead.

1.8 Nuleaf's Executive Director participated in a Scottish Government meeting on the 24<sup>th</sup> August on the future of the Chapelcross and Hunterston sites. It focussed on the consultation on a **Scottish Energy Strategy** and **Just Transition Plan** for the nuclear sector<sup>6</sup>. Scotland is not planning new nuclear stations and the aim of the Just Transition Plan is to consider the following questions:

- What risks does the energy transition present for communities around nuclear sites in Scotland?
- What can be done to mitigate these risks?
- How can we ensure that those in the nuclear industry are able to take advantage of 'green' job opportunities?
- What specific steps can we take to ensure that the energy transition is fair and just for those in the nuclear industry?

## 2. Sellafield News

2.1 The **Magnox Reprocessing Plant** at Sellafield closed on the 17<sup>th</sup> July, ending 70 years of reprocessing in the UK<sup>7</sup>. The plant recycled fuel used in the first-generation Magnox reactors. Following the closure of Wylfa in 2015, the facility has been working through the stockpile of spent fuel. Employee numbers will remain similar during the post-operational clean out phase (POCO), which will last around 2 years.

2.2 June saw the safe removal of the first batch of waste from the **Magnox Swarf Storage Silo** on the Sellafield site<sup>8</sup>. The building has stored nuclear waste in water filled chambers for 60 years and the aging structure is one of the most hazardous nuclear sites in the UK. The removal of waste, using purpose-built machines, will take around 20 years. The waste will be placed in containers and eventually sent to the GDF.

2.3 The first active shipment of legacy waste drums from Harwell to Sellafield has been completed. In total around 800 concrete lined drums of Intermediate Level

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<sup>6</sup> <https://consult.gov.scot/justtransition/>

<sup>7</sup> [https://www.gov.uk/government/news/job-done-sellafield-plant-safely-completes-its-mission?utm\\_medium=email&utm\\_campaign=govuk-notifications-topic&utm\\_source=1d851e77-2f24-4a80-a1e4-93163b99bf18&utm\\_content=immediately](https://www.gov.uk/government/news/job-done-sellafield-plant-safely-completes-its-mission?utm_medium=email&utm_campaign=govuk-notifications-topic&utm_source=1d851e77-2f24-4a80-a1e4-93163b99bf18&utm_content=immediately)

<sup>8</sup> <https://www.gov.uk/government/news/first-waste-removed-from-old-nuclear-sellafield-store>

Waste (ILW) will be transferred to Sellafield over the next three years. The waste is contained in Gemini packages which have been refurbished in France<sup>9</sup>.

### 3. UK Government update

3.1 The UK Government's response to the recent consultation on a proposed **regulatory framework for fusion energy** has been published<sup>10</sup>. Nuleaf was one of 58 organisations and individuals to submit views on the proposals.

In their response the Government has confirmed that it intends to regulate future fusion energy facilities under the same legal framework as at present. It states that *'While the hazard and complexity of fusion energy facilities will be greater than current research facilities, we remain confident that existing regulations in the UK will be able to uphold safety standards in a proportionate way. We are also clear that the fundamental differences between nuclear fission and fusion mean that it would be disproportionate and unnecessary to incorporate fusion energy facilities into nuclear regulations.'*

The proposal to maintain the current regime for fusion regulation has been incorporated in the Energy Security Bill (see below).

3.2 The **Energy Security Bill** was introduced into Parliament on the 6<sup>th</sup> July. It is designed to enable investment in a range of new, low carbon energy technologies and well as supporting an energy price cap. The Bill also:

- Supports the decommissioning and clean-up of legacy nuclear sites by clarifying that a GDF located beneath the seabed will be licensed.
- Brings forward the final delicensing and re-use of nuclear sites, allowing more proportionate clean-up of these sites. The Government estimates this will deliver savings of around £490 million over the first 20 years, with similar savings up to 2080.<sup>11</sup>

### 4. Decommissioning of the AGR Stations

4.1 On the 2<sup>nd</sup> September the UK Government published its response to the **Public Accounts Committee (PAC)** report on the decommissioning of the AGRs<sup>12</sup>. In its report the PAC had highlighted the shortfall in the Nuclear Liabilities Fund (NLF), intended to finance the AGR decommissioning. In March 2021, the Fund's assets

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<sup>9</sup> [https://www.gov.uk/government/news/gemini-containers-return-to-action?utm\\_medium=email&utm\\_campaign=govuk-notifications-topic&utm\\_source=b3ea621f-4dce-4796-b8b9-8b8f8130095e&utm\\_content=immediately](https://www.gov.uk/government/news/gemini-containers-return-to-action?utm_medium=email&utm_campaign=govuk-notifications-topic&utm_source=b3ea621f-4dce-4796-b8b9-8b8f8130095e&utm_content=immediately)

<sup>10</sup> <https://www.gov.uk/government/consultations/towards-fusion-energy-proposals-for-a-regulatory-framework>

<sup>11</sup> <https://www.gov.uk/government/news/plans-to-bolster-uk-energy-security-set-to-become-law>

<sup>12</sup> <https://committees.parliament.uk/work/6429/future-of-the-advanced-gas-cooled-reactors/publications/>

were valued at £14.8 billion with decommissioning costs estimated at £23.5 billion. The PAC also concluded that:

- Given the costs of decommissioning the AGRs has almost doubled since 2004-5, there is a significant risk that costs will rise further.
- A disproportionate risk for meeting future costs has been placed on the taxpayer by the deal struck with EDFE, and lessons must be learned in ensuring that new nuclear power stations have fully funded decommissioning programmes.
- They are not convinced that BEIS has struck the right balance in incentivising the NDA and EDFE to deliver safe and efficient defueling while reducing costs.
- Arrangements for transferring nuclear stations to the NDA are 'worryingly under-developed.'

In their response the Government has agreed with the PAC on these and other recommendations it made. They have committed to:

- Review the NLF's investment strategy to achieve best value for the taxpayer.
- Work with the NLF to develop a cost estimate based on revised costs for defueling/deconstruction and uncontracted liabilities. The PAC has challenged the Government should ensure that explicit allowance has been made for 'optimism bias.'
- Respond on the issue of costs for decommissioning new nuclear stations, while noting that the Funded Decommissioning Programme (FDP) for new plants has learnt from the EDF experience.
- Respond by November 2022 on the issue of incentives to NDA and EDFE, explaining how they will assess and monitor the effectiveness of the mechanisms to incentivise NDA and EDFE.
- Share the detailed plan to transfer Hunterston B from EDFE to the NDA by May 2023; and provide a summary of transfer plans for other stations by that time.

4.2 The removal of nuclear fuel from **Hunterston B** nuclear power station began in May and EDF has launched a consultation on its decommissioning<sup>13</sup>, supported by a virtual exhibition<sup>14</sup>.

The consultation proposes that buildings and structures will be demolished to ground level with basement areas backfilled with material arising from decommissioning. The reactor buildings will be enclosed within a 'safestore' and left for seven decades to allow radioactive decay before final clearance. The site is expected to be available for use again in 90 years.

4.3 **Hinkley Point B** power station closed on the 1<sup>st</sup> August<sup>15</sup> after 46 years of generation. Preparations are now underway for defueling, expected to begin in late

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<sup>13</sup> [https://www.edfenergy.com/energy/power-stations/hunterston-b?gclid=EAJaIQobChMI2qiDkdbz-QIVsYFQBh0gowpxEAAYASAAEgIGdfD\\_BwE](https://www.edfenergy.com/energy/power-stations/hunterston-b?gclid=EAJaIQobChMI2qiDkdbz-QIVsYFQBh0gowpxEAAYASAAEgIGdfD_BwE)

<sup>14</sup> <https://virtual.woodplc.com/VirtualSpace/116586>

<sup>15</sup> <https://www.burnham-on-sea.com/news/46-years-of-power-generation-at-hinkley-point-b-nuclear-plant-come-to-an-end-today/>

2022 and to take 3 or 4 years. The station currently employs 500 staff and 200 contractors, and this level of employment is expected to remain broadly constant during defueling.

A consultation on the decommissioning of the station is anticipated later this year.

## 5. Regulators Update

5.1 The **Office for Nuclear Regulation (ONR)** has ordered improvements at the Dounreay site following the release of a small amount of radioactive Tritium caused by a chemical reaction in a storage tank.

The ONR stated *'Inspectors have now identified that DSRL (the operator) contravened one or more relevant statutory provisions and have issued an enforcement letter to the duty holder, seeking the necessary improvements in its arrangements to prevent a reoccurrence and return DSRL to compliance.....The process involved very low levels of radioactivity and consequently the radiological risk to workers and the public were negligible. There was no nuclear safety consequence.'*

The **Scottish Environment Protection Agency (SEPA)** has launched its own investigation<sup>16</sup>.

5.2 The Environment Agency has launched a consultation on how radioactive waste will be stored at the **Hinkley Point C** plant. This relates to a proposal from the operator to change from 'wet' to dry storage of waste<sup>17</sup> prior to disposal in a GDF.

## 6. Nuleaf update

6.1 A significant number of Nuleaf members attended the NDA's **Stakeholder Summit** in Edinburgh on the 7<sup>th</sup> and 8<sup>th</sup> September. Nuleaf's Chair Cllr David Moore, and Executive Director Philip Matthews, participated in different discussion sessions at the event. Nuleaf also arranged a dedicated meeting for our members with NDA CEO David Peattie. Feedback on the event will be sought under Any Other Business at the meeting on 15<sup>th</sup> September.

6.2 A small Nuleaf delegation visited Rosyth dockyards in Fife on the 8<sup>th</sup> September to discuss the work of the MOD in decommissioning former nuclear powered submarines. Nuleaf was involved in developing the proposals for the Submarine Dismantling Project (SDP) and an invitation to visit Rosyth was extended to Nuleaf

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<sup>16</sup> <https://www.bbc.co.uk/news/uk-scotland-highlands-islands-62251810>

<sup>17</sup> [https://www.gov.uk/government/news/proposed-change-to-how-hinkley-point-c-stores-radioactive-waste?utm\\_medium=email&utm\\_campaign=govuk-notifications-topic&utm\\_source=f91153f2-df26-451d-84e0-e10ad1bd9090&utm\\_content=immediately](https://www.gov.uk/government/news/proposed-change-to-how-hinkley-point-c-stores-radioactive-waste?utm_medium=email&utm_campaign=govuk-notifications-topic&utm_source=f91153f2-df26-451d-84e0-e10ad1bd9090&utm_content=immediately)

following a meeting with the Director of the SDP in 2020. The visit was delayed due to Covid restrictions.

The visit included representatives of Copeland Borough Council and the Nuclear Free Local Authorities (NFLA) as well as Nuleaf's Executive Director.

6.3 Following interest from members, Nuleaf is holding an online meeting on nuclear **Emergency Planning** on the 11<sup>th</sup> October. The meeting will hear from ONR on the current policy context and a range of other issues and is open to Nuleaf Councillors and officers, as well as to Emergency Planning officers. Anyone interested in attending should contact Catherine Draper.

## **7. International news**

7.1 Nuleaf members may be interested in signing up for the **Nuclear Energy Agency's** (NEA) monthly news magazine. The latest edition includes articles on the funding of decommissioning and transport of nuclear waste<sup>18</sup>.

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<sup>18</sup> [https://www.oecd-nea.org/jcms/pl\\_72806/nea-news-39-1-39-2](https://www.oecd-nea.org/jcms/pl_72806/nea-news-39-1-39-2)