

Briefing Paper 1

Proposals for the Decommissioning of the AGR Stations

Revised August 2022

1: Introduction

It was announced on the 7th of June 2021¹ that an agreement had been reached for the defueling and decommissioning of the UK's seven Advanced Gas Cooled (AGR) reactors.

Three of the AGR stations have, or are about to, cease generation and the rest are due to end their operational life by 2028. The decommissioning of these sites and management of the nuclear waste that will arise has economic, social and environmental implications for host local authorities and communities.

This Briefing Paper explains the plans for the decommissioning of the AGR stations and the expected timetable for their remediation. It highlights the issues for local government and the role that councils will play as the clean-up progresses.

2: The EDF Fleet and current closure plans

All of the current fleet of grid connected nuclear reactors in the UK are operated by EDF Energy. Consisting of seven AGR's and a PWR², the plants date from the 1970s to the 1990s (Table 1).

Station	Type	Commissioned	Scheduled Decommissioning
Hunterston B	AGR	1976	2022
Hinkley Point B	AGR	1976	2022
Hartlepool	AGR	1983	2024
Heysham 1	AGR	1983	2024
Dungeness B	AGR	1983	2022
Heysham 2	AGR	1988	2028
Torness	AGR	1988	2028
Sizewell B	AGR	1995	2035

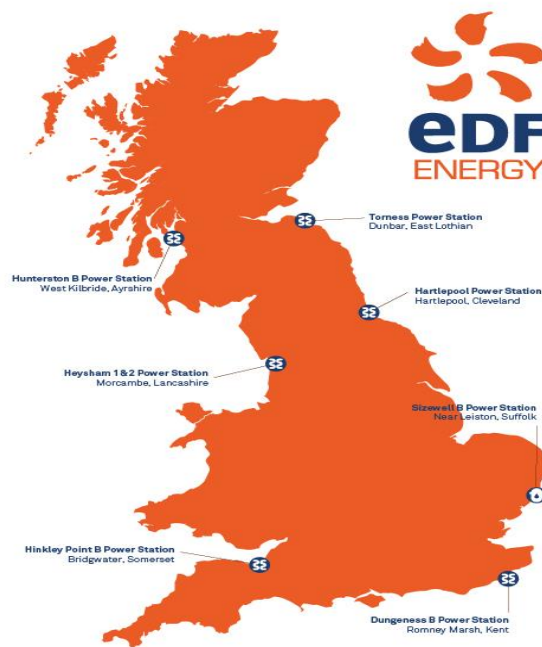
Table 1: The EDF reactor fleet.

¹ <https://www.gov.uk/government/news/decommissioning-agreement-reached-on-advanced-gas-cool-reactor-agr-nuclear-power-stations>

² Pressurised Water Reactor

The timetable for closure and decommissioning of the AGRs has moved forward in the last year, due to the identification of operational issues at a number of stations. Generation has already ceased at Dungeness B, Hunterston B and Hinkley Point B and defueling at all three sites has either started already or will commence before the end of 2022.

All four of the remaining AGR stations will end generation on a rolling basis by 2028. Plans are that the more recent PWR station at Sizewell will operate until 2035.



Map 1: Location of the EDF stations

3: Agreement on decommissioning and waste management

The UK Government (Department for Business, Energy and Industrial Strategy) has reached an agreement with EDF and the Nuclear Liabilities Fund (NLF) over the decommissioning of the Advanced Gas Cooled (AGR) reactors³.

Under the agreement, the AGR's will be defueled by EDF before being transferred to the NDA to complete the decommissioning process, with Magnox as the Site Licence Company (SLC). In advance of the transfer a decommissioning plan for each station will be developed. The NDA and Magnox will engage with EDF to

³ <https://www.gov.uk/government/publications/decommissioning-edf-advanced-gas-cooled-reactor-agr-stations/advanced-gas-cooled-reactor-agr-decommissioning-factsheet>

ensure that the plan reflects NDA Strategy, public procurement regulation and the learning that Magnox have acquired from their work on the first-generation stations.

EDF aims to achieve the defueling of reactors in 3.5 to 5 years. However, Dungeness B will take longer due to its reactors being larger and containing more fuel. Defueling there is estimated to have a duration of 10 years.

EDF's costs of defueling and decommissioning will be met from the NLF's Segregated Decommissioning Fund. The NLF⁴ was originally established in 1996 as the Nuclear Generation Decommissioning Fund to provide finance for the decommissioning of the eight stations now operated by EDF and some other nuclear liabilities. The Fund is a limited company and is owned by the Nuclear Trust, which has five trustees, three appointed by BEIS and two by EDF.

The arrangements are intended to incentivise EDF to achieve the defueling of the AGR stations in a cost-effective manner, and the company has agreed to take on the potential of up to £100m in charges for missing targets in return for the potential to earn up to £100m for meeting targets.

Overall, the Government believes that this arrangement will achieve £1Bn of savings without compromising safety or security. It expects these savings to be realised over the 20 years of the defueling and decommissioning programme, through a combination of:

- removal of uncertainty for EDF so they can prepare with full confidence for defueling, which will lead to shorter defueling periods;
- the introduction of incentivisation, including some risk-share to enhance defueling performance; and
- synergies and efficiencies anticipated through bringing the AGR and Magnox stations together under a single owner and licensee.

Decommissioning the AGR stations will further expand the scale of the NDA's operations, which already represent the largest decommissioning programme in Europe. At Hinkley Point, Hunterston and Dungeness it will lead to two closed nuclear stations being situated side-by-side. New locations at Torness, Hartlepool and Heysham will become part of the NDA/Magnox estate.

⁴ <https://www.nlf.uk.net/>

4: Issues for local authorities

The timescales for closure, defueling and decommissioning for each EDF site are still being firmed up. The Lifetime Plans for the Magnox stations that are co-located with some EDF plants are also under review. Despite this, a range of issues for local authorities and communities can be identified.

Direct Employment

The current EDF stations support thousands of direct and indirect jobs across the UK. Each site is a major employer within their community with, for example, 500 staff and 250 contractors at Dungeness B.

The impact of plant closure, defueling and decommissioning on employment levels at EDF sites is, as yet, unclear. The move into defueling will ensure a continuity of jobs, though there will be a managed reduction over a 3 to 4 year period. Beyond that employment levels will be linked to the planned timetable for decommissioning at each site, and the potential for co-ordinated work across 'A' and 'B' sites (and also new 'C' sites) where these sit side by side.

Wider socio-economic impacts

Operational nuclear stations are major contributors to local authority finances through significant business rate payments. These cease when the station ends generation, presenting challenges for council budgets.

At the same time, decommissioning of the AGRs should provide wider economic benefits and supply chain opportunities. The Government has stated that *'The transfer of the stations to the NDA will provide enhanced opportunities for realising synergies, sharing know-how and creating a coordinated and consistent strategy as well as maximising and coordinating competition through the supply chain, which will also allow for more efficient delivery.'*

Working with local authorities and LEPs, there should be scope for skills enhancement and retraining that will allow local people to access the new roles required for decommissioning. The NDA must also apply its commitments to social value to its work around the EDF sites.

Planning

Local Planning Authorities (LPAs) have a role as a regulator of the EDF stations as they are decommissioned. LPAs will have to approve the Planning Applications needed for decommissioning such as building new facilities or repurposing existing ones. Land Use and Waste Plans will require clear policies that set out the

council's view on the process by which the stations and wider sites are remediated.

Issues that will need to be addressed include:

- The scope for interim uses and the Council's vision for the next planned use of the site (see below)
- Storage of waste
- Transportation
- Employment and skills
- Environmental protection and carbon management
- Mitigation measures through e.g. Section 106 agreements.

Where there is co-location with an existing Magnox station, or with a new nuclear development, then the inter-relationship between activities and plans for all sites will need to be considered. Some of our members have a concern that the development of joint decommissioning plans, covering Magnox and EDF sites, may lead to delays in the decommissioning of the 'A' stations. Clarity from the NDA on this issue would be welcome.

Nuleaf believes that a Master-planning or Strategic Planning approach should be adopted for the decommissioning of all NDA sites, including the AGR fleet. We also believe that, where supported by the local authority, Magnox should enter into Planning Performance Agreements (PPAs) in relation to the decommissioning of the AGR sites. PPAs already exist at some NDA locations.

Next planned use

The next planned use of a current nuclear site is a central driver for decommissioning with implications for the local economy and environment. All site end states are currently under review and may change. However, at present NDA sites are intended to move to a variety of future uses, from open space and nature habitat to business parks or new nuclear development. For other sites the next planned use has yet to be determined.

EDF, NDA and Magnox will have to engage effectively with local government and communities to determine the next planned use for the AGR sites and identify any opportunities for interim uses, including where this would require delicensing of part of a site.

Where an AGR is co-located with a Magnox site this may lead to a rethinking of the desired next use for the combined area covered by the two. The AGR sites will need to be incorporated into the NDA's vision as set out in their Land Optimisation Programme, currently under development.

National and local engagement

Nuleaf engages with EDF and NDA/Magnox on this agenda, through regular dialogue and the hosting of events that allow our members to explore and discuss proposals for AGR decommissioning, site remediation and waste management.

Looking forward, the management of EDF sites by Magnox will require thought to be given as to how local engagement processes are reformed to reflect the new reality on the ground.

In some host communities a Site Stakeholder Group (SSG) is already established, and EDF has begun the process of engaging with local authorities and SSGs around the three AGR sites that have already ceased generation.

In Heysham, Hartlepool and Torness this isn't the case, although EDF does have Local Community Liaison Committees (LCLCs) which perform a similar purpose to SSGs and involve local authority officers and elected members. Unlike NDA, EDF operates visitor centres around its nuclear stations. It is unclear whether these will continue to function once a station moves to decommissioning.

Community funds

For Hinkley Point C, the UK Government has made a commitment to a large community benefit package of up to £1,000 per megawatt (MW) of generating capacity over the first 40 years of the site's life⁵. EDF also operates a community fund around its renewable energy developments.

Throughout their generating lives, the AGR stations have invested around £10,000 a year into local projects with employees engaged in their local communities. M

The NDA is required to provide socio-economic support to host communities, and Magnox provides more significant community funds around its sites than EDF does. This should be extended to the AGR stations once under Magnox control, and they should be integrated into the NDA's strategic work on socio-economics and sustainability. The overall scale of NDA funds should be extended to reflect the larger scale of its operations as it oversees the EDF station decommissioning.

Environmental protection

Responsibility for protection of people and the environment, and for safety, will remain with the Environment Agency/SEPA and the Office for Nuclear Regulation

⁵ <https://www.gov.uk/government/speeches/community-benefits-for-sites-that-host-new-nuclear-power-stations-michael-fallon>

(ONR) throughout the defueling and decommissioning phases, as it does with current NDA sites.

Through engagement with EDF/NDA and the regulators, councils have the potential to promote wider environmental benefits during the decommissioning phase, for example through enhancement of biodiversity on or around the site. As Magnox will be responsible for the clean-up of both A and B sites in some locations, there will be scope for collaborative working across the two sites, which may enable the freeing up of land for positive environmental outcomes. A Master-planning approach, as highlighted earlier, is also a useful vehicle for the promotion of biodiversity, with evidence that a less strategic and more piecemeal approach cannot deliver significant change.

The NDA has, in its recent Strategy⁶, committed to move towards net-zero carbon across its operations and deliver against the UN Sustainable Development Goals. These commitments will need to be applied to its work on the AGR sites. Discussion should be undertaken with EDF to ensure that action on these areas is developed through the defueling phase.

⁶https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/973438/NDA_Strategy_2021_A.pdf