

AGR Decommissioning

Presentation to Nuleaf – 9 Feb 2022

BEIS – Andy Maggs, Head of AGR Decommissioning and NLF Policy

NDA – Duncan Thompson, Director of Group Development

EDF – Mark England, Director of Transfer and Deconstruction

Magnox – Nigel Houlton, Future Missions Director



Department for
Business, Energy
& Industrial Strategy

Nuclear
Decommissioning



 Magnox

Overview

- The AGR decommissioning agreement – BEIS
- Roles and responsibilities – NDA
- Socio-economics – NDA
- Governance – BEIS

EDF

- EDF's Nuclear Decommissioning mission
- EDF's defueling programme
- End of generation timescales
- What is the decommissioning process
- Working with our people

Magnox

- Context – the future for Magnox
- What do the revised decommissioning arrangements mean for us
- Our approach
- Strategic alignment between NDA, Magnox and ENGL

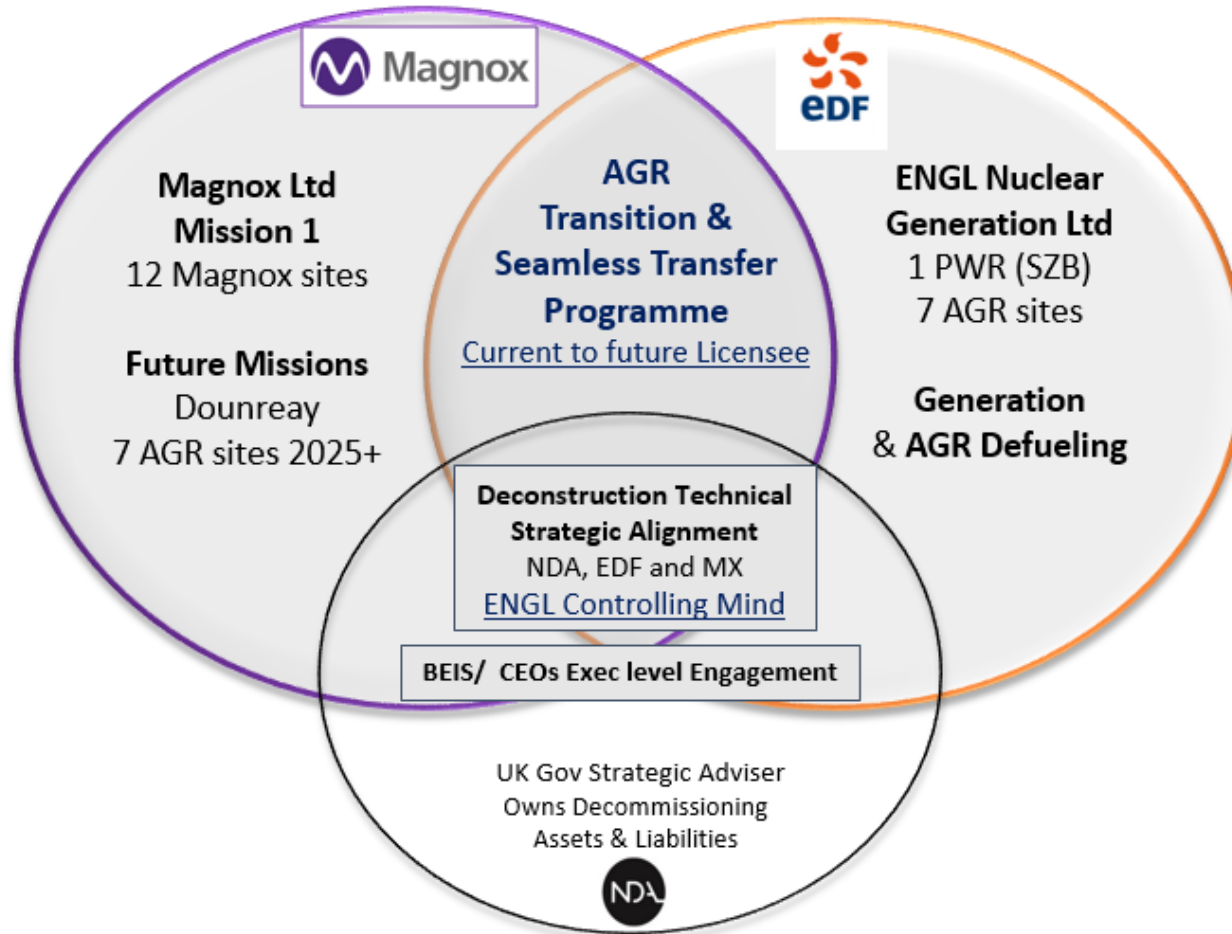
All

- Questions

The AGR decommissioning agreement

- In June 2021, UK Government and EDF agreed improved arrangements to safely and efficiently decommission Britain's seven AGR stations.
- Before the agreement EDF was responsible for total lifetime decommissioning.
- EDF will defuel the sites before they are transferred to the NDA for Magnox to carry out the next stage of decommissioning.
- The agreement will allow EDF, NDA and Magnox to capitalise on their respective areas of expertise.
- The cost of AGR decommissioning will be met by the Nuclear Liabilities Fund (NLF). Contributions have been made to this fund by the operators and government and the fund is backed by government.

Roles and responsibilities





Socio-economics and skills

- Socio economic support for local communities (to AGR sites post transfer) will need to be better understood
- We will work in partnership with the sites/region to understand priorities with a focus on creating/ leaving an appropriate legacy
- We're at an early stage of interactions; working on building relationships and establishing ways of working to ensure we build and leave a lasting, positive legacy

Governance

- AGR Senior Sponsorship Group: Chaired by the BEIS Permanent Secretary with NDA Group CEOs and EDF CEO and MD as members (annual)
- Senior Alignment Forum: Senior leads from each business including the NLF and regulators – chaired by BEIS (every 6 months)
- Senior Strategy Committee: The SSC is a triparty senior meeting where EDF/Magnox and NDA agree strategic direction and synergies as we plan to decommission the AGR and Magnox stations (quarterly)
- Transition and Transfer Sponsoring Group: EDF, Mx and NDA Directors overseeing seamless transfer from EDF to Mx (quarterly)

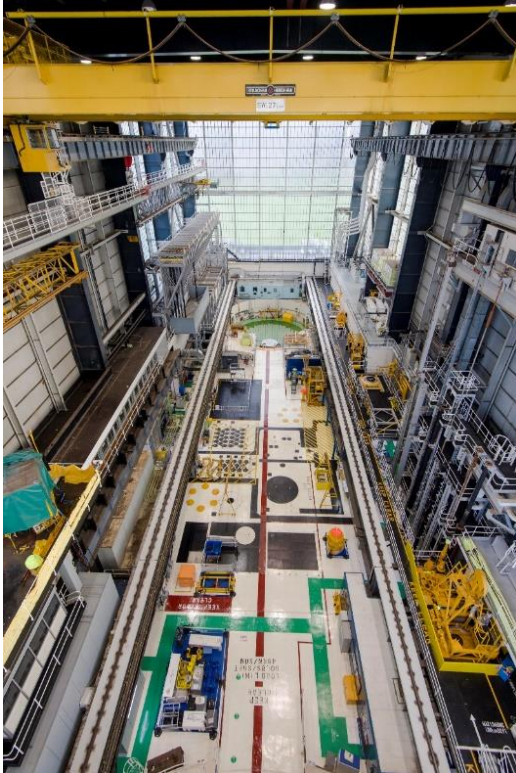
EDF's Nuclear Decommissioning mission

- EDF's mission is to safely minimise the long term costs of defueling and achieve seamless and effective transfer to the NDA.
- Zero harm is, and always will be, the cornerstone of our vision - nuclear, environmental and conventional safety are our number one priority as we step through the station lifecycle and transfer to Magnox.



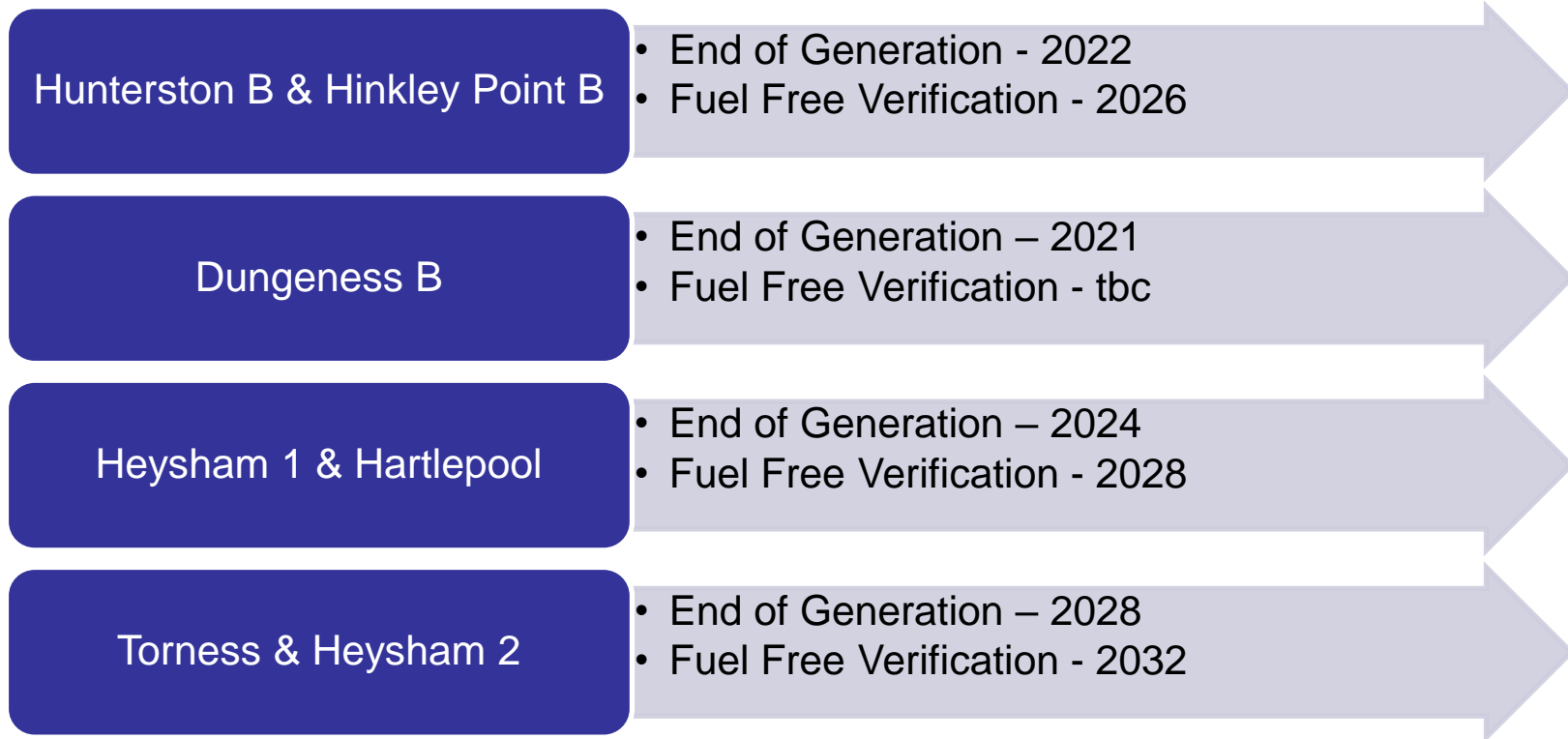


EDF's defueling programme



- All seven of EDF's AGR nuclear power stations are expected to have ended generation by 2028
- EDF's job will be to remove all the used fuel from the reactors and fuel ponds, which represents over 99% of the radioactive material
- Defueling is a continuation of the operational activity EDF's people have been carrying out for 40+ years
- The objective is to deliver value to the UK taxpayer while ensuring safe and effective delivery of 'fuel free' reactors, ready to be decommissioned.

End of generation timescales



Dates subject to change

Sites transfer – approx. 9-12 months after FFV

What is the defueling process?



There are around 300 fuel channels in each reactor, all of which need to be carefully emptied.



A fuelling machine removes the fuel assembly from a channel and each fuel element is transferred to a cooling pond where it stays for a minimum of 90 days.



Once cooled, the fuel is removed from the pond, packaged, and loaded into a container called a flask. The flask is transported by train to Sellafield in Cumbria where it is further cooled and stored until it is safe to be disposed of.



Department for
Business, Energy
& Industrial Strategy

Nuclear
Decommissioning



Magnox

What is the defueling process?



During the defueling phase, around 400 spent fuel flasks are shipped to Sellafield from each EDF site. This phase will take between 3 and 5 years per site to complete.



Once the site is fuel free, EDF will transfer the sites to Magnox and the next stage of decommissioning begins. The focus turns to the treatment and removal of low level radiological and non-radiological wastes, along with the demolition and removal of redundant facilities.



New construction of waste facilities would require EDF to submit planning applications to the local planning authority. EDF will carry out public consultation as part of that process.

Working with our people

- We are committed to working with our people and the Trade Unions to support them through the changes at our sites.
- We are working closely with Magnox to understand the people requirements for each site during the decommissioning phase.



Example: Hunterston B

EDF has been consulting with staff about their futures for the past two years through a series of “aspirational conversations”. The majority of staff indicated they would like to continue working at Hunterston B. Every member of staff who said they wanted to stay has been successful in securing a role through defueling. Some staff have been supported to move to other EDF sites and some have opted to retire.



Department for
Business, Energy
& Industrial Strategy

Nuclear
Decommissioning



Magnox

Advanced gas-cooled reactor (AGR) decommissioning

*Nigel Houlton, Future Missions
Director*

Context – the future for Magnox

- Move to a rolling, site specific decommissioning strategy based on learning from Bradwell
- Joining with Dounreay under a single licensee board
- AGRs post-defueling
- ~Doubling in scale, people, sites, funding
- No longer a “project to close” but an enduring strategic capability - safe delivery, vfm for the taxpayer, socially responsible



What the revised AGR decommissioning arrangements mean for us and our next steps

□ The revised arrangements

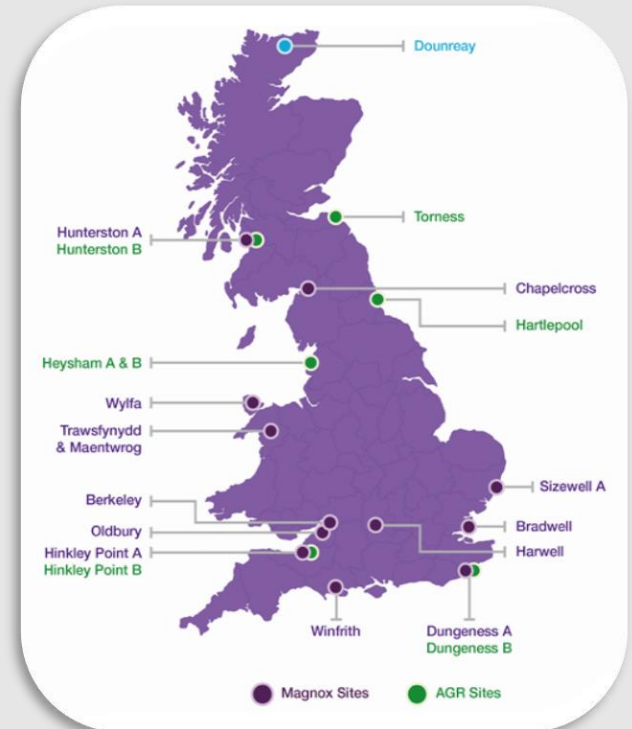
- EDF retains responsibility for defueling the AGR fleet funded by the Nuclear Liabilities Fund (NLF)
- At fuel free verification, each AGR station will transfer ownership to the NDA with Magnox becoming the Licensee
- At this point NDA/Magnox will be responsible for the rest of the decommissioning programme, still funded by the NLF

□ What it mean for us

- Under current plans the first AGR (Hunterston B) will transfer to NDA ownership (dependent on the defueling programme)
- Each AGR will come with a number of station staff plus a decommissioning plan
- Each AGR station will need to be re-licensed to Magnox
- Over time, the AGRs will add 7 new sites to our portfolio, 3 of which are adjacent to current Magnox sites!

□ The next steps

- We are building a positive, collaborative relationship with EDF utilising common interests
- We are creating an agreed, joint seamless transfer programme with EDF and NDA that addresses all the relevant topic areas
- We are working with EDF and NDA to ensure alignment of the AGR decommissioning plans with Magnox learning – we will all inherit this plan!



Our approach

- Formation of Future Missions team in Magnox
 - Minimise distraction of our teams from safe delivery of our current mission
 - A core team to lead the programmes to integrate
- Magnox, the AGRs and Dounreay under a single Licensee Board
 - Lead the changes required to enable Magnox to be match fit to deliver both its revised current and future missions
 - Work with our colleagues in EDF and Dounreay to ensure seamless transfer and engage with stakeholders



Some of the Magnox and EDF core team



Strategic alignment between NDA, Magnox and EDF

- With the certainty provided by revised AGR arrangements we are now proactively sharing learning and identifying potential opportunities to realise greater value across what will be a combined Magnox and AGR fleet

Example: Shared ILW store for Hunterston A & B and Hinkley Point A & B

- NDA, EDF and Magnox worked together to consider the feasibility of sharing waste storage and processing facilities.
- We agree the strategic planning assumption for ILW waste should be that the use of the existing interim stores will be possible and preferred.
- On this basis EDF has suspended work on standalone stores and is engaging with regulators.
- Magnox/NDA will further develop this option and, if it remains appropriate, formally confirm the change in their plans.





Department for
Business, Energy
& Industrial Strategy

Nuclear
Decommissioning



 Magnox