

**Unite the Union response to the Nuclear Decommissioning  
Authority (NDA) Consultation on their Draft Strategy - published  
August 2020**



**1. Introduction**

- 1.1. This submission is made by Unite, the UK's largest trade union with over one million members across all sectors of the economy, including manufacturing, financial services, transport, food and agriculture, construction, energy and utilities, information technology, service industries, health, local government and the not for profit sector. Unite also organises in the community, enabling those who are not in employment to be part of our union.
- 1.2. This response has been sent on behalf of those Unite workers at each of the nuclear facilities around the UK including those who work at Magnox stations, through to those involved in the construction of Hinckley C, the reprocessing, consolidation and storage of spent fuel and waste at Sellafield, to those producing new fuel rods. It is also on behalf of those future members that will be involved in the construction and operation of any long term storage solution.

**2. Questions**

***1/ We are currently developing our sustainability strategy. How ambitious should we be in supporting UK government and the devolved administrations' sustainability targets, including their commitment on carbon reduction?***

- 2.1. Unite believes that the issue of climate change should always be high on the agenda for every organisation given the evidence of increasing extreme weather and the pattern of things going from bad to worse. Without swift decisive action, the world will be facing a runaway climate with a very high chance that it could lead to the end of life as we know it on this planet. For that reason, Unite believes that any actions to support the Government in reducing organisations' climate footprint should be explored. One only has to look at how the warming climate is causing the once frozen tundra in northern America and northern Russia to melt and releasing trapped pockets of methane to realise that these releases themselves are enough to more than double the amount of greenhouse gasses in the atmosphere. Methane is, over a 20 year period, 80 times as powerful as Carbon Dioxide (CO<sub>2</sub>) but due to the relative speed of its degradation in the atmosphere, this drops to 28 times as powerful as CO<sub>2</sub> over a 100 year period.
- 2.2. The increased levels of CO<sub>2</sub> in the atmosphere cause acidification of the world's oceans as the CO<sub>2</sub> gets slowly absorbed by the world's oceans. This absorbed CO<sub>2</sub> is used by plants to grow, which in turn provides food for sea creatures and eventually the CO<sub>2</sub> is turned into limestone. However, as the oceans seas become more acidic, the limestone converts back to minerals with CO<sub>2</sub> gas speeding up the acidification and warming of the planet. These natural feedbacks are what climatologists are hoping to avoid as these feedbacks can lead to what is known as a runaway climate, where

global temperatures increase dramatically resulting in crop failures, droughts and flash flooding. The warming oceans result in a smaller and smaller ice cap with the melting of glaciers and snow coverage on mountain tops. Ice and snow reflect 90% of the sun's radiation, open water on the other hand absorbs 90% of the radiation adding to the speed of the warming. Additionally, the loss of the frozen water in the world's glaciers will in turn lead to increases in global sea levels and contribute to the loss of the source of water to much of the world's population, particularly in China.

- 2.3. Unite and the other trade unions believe so strongly in implementing measures to avoid these climate changes, that it provides a module in all of its training for all of its health and safety representatives. Unite feels that without staff engagement, any efforts to reduce the impact of climate change will be ineffective. Unite has for over a decade, called for the statutory recognition of environmental representatives to assist companies in reducing their energy and water consumption in the hope that this will in turn reduce the organisations' carbon footprint.
- 2.4. Unite has examined publications on the subject and has links to members across the economy to provide feedback on the real impacts felt as a result of climate change in the UK. Unite has links to trade unions from across the world and therefore, can exchange views with them in order to obtain a far more balanced view on the way in which the environmental changes are impacting workers and their families and for projections of the impacts going forward. Unite is of the belief that the targets set by the UK Government to be carbon neutral by 2050 do not go far enough and that every effort should be employed to be carbon neutral far sooner.
- 2.5. Unite would therefore, offer its services to help speed through operational changes that reduce the impact of the nuclear industry to try to obtain buy-in from its members at large. Unite believes that one area that can cause controversy is through workers' commute to and from work. Whilst Unite will support efforts such as car sharing, bicycling to work and the use of public transport, or even the use of an employer's bus service to bring workers to their place of work, Unite recognises that some workers have to drive. Unite would therefore, support efforts for more charging stations at workplaces and the electrification of workers' commute. Areas such as these may not be aspects of a sustainability strategy that the NDA envisaged but are important if we are to tackle climate change. It should not be a case of closing off parking spaces to force workers out of their cars, as there may be some very legitimate reasons why this may not be practical for the workers in question.
- 2.6. Unite is also concerned about the efficacy of battery power packs used in vehicles. Unite would therefore, suggest that electrical vehicles should only be permitted where their batteries use is ethical sourced from raw materials via suppliers with good workers' rights and conditions in developing nations and not situations where materials are sourced from nations where child labour is utilised to extract and process the ore.
- 2.7. One fuel source that is seen by many as a solution for many future transport needs is hydrogen, which can be created electrolytically<sup>1</sup> using excess electrical generation over and above that required by the grid to split water and in the future high-

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<sup>1</sup> By passing electricity through water or ammonia to produce hydrogen and oxygen or nitrogen depending on the source material.

temperature reactors, also likely to be used, to make it thermochemically<sup>2</sup> viable. Consequently, as there are now a number of vehicles being converted to hydrogen, or being produced to use hydrogen fuel cells, Unite would argue that it would make sense for any produced hydrogen to be made available for sale to staff, to fill up their vehicles on site at cost. Such a move could substantially reduce the carbon footprint of organisations via hydrogen combustion or use through a fuel cell produced only by water. The hydrogen produced could also be passed through fuel cells to balance the grid without the requirement to use more flexible but less sustainable methods of generation.

**2/ Our approach to the development of this Strategy has been to engage collaboratively with key stakeholders. In your opinion, is there anything we should have done differently during this development phase?**

2.8. Unite believes that more interaction with the representatives of the workforce would have been wise, as opposed to the imposition of strategy changes and alterations in working practices without consultation. Unite would always welcome a truly collaborative approach. Unite would also welcome the recognition of workplace environmental representatives to conduct surveys of power and water usage, encourage fellow workers to switch off any used equipment and maximise the use of natural light wherever possible. These representatives could discuss with management a way forward which brings the workforce with them as opposed to one which may cause issues.

**3/ We are planning to update the document that describes the NDA Value Framework, which was originally developed with stakeholders over 10 years ago. In your opinion, does the Value Framework still capture the factors that should be considered in our decision making?**

2.9. Unite considers that the NDA Value Framework still has merit especially in light of One NDA. One NDA places an "increased value for money for the taxpayer" top of it list, whilst finance is just one of an equally balanced segment in the Value Framework. Unite is not suggesting that the NDA operate at an inordinate amount for the task at hand, but there should be a limit to such a policy which ranks value for money above all else. Unite would highlight that safety should be top of the list and the NDA should not adopt a penny pinching approach when a little more will enhance the safety and reduce the risk. Additionally, whilst One NDA talks about an improved stakeholder confidence and trust and an improved culture for the NDA's people, it does not look at the wider socio-economic impact of decisions it has, or is about to make. Under One NDA, any impact is assessed on a purely internalised market framework, choosing the least expensive route that will fulfil a purpose whilst the Value Framework approach considers the impact this route may have over the longer term for the community that will suffer if there is a loss of contract etc. Unite believes that a timely process should be maintained in the disposal of existing facilities which ensures cost controls and support for the British tax payer, but also ensures all safety protocols are followed as its main priority.

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<sup>2</sup> Such methods of hydrogen production using nuclear reactors are discussed in paper by Naterer, G. F.; et al. (2009). "Recent Canadian Advances in Nuclear-Based Hydrogen Production and the Thermochemical Cu-CI Cycle". *International Journal of Hydrogen Energy*. **34** (7): 2901–2917. [doi:10.1016/j.ijhydene.2009.01.090](https://doi.org/10.1016/j.ijhydene.2009.01.090).

**4/ This section summarises our current strategic position. In your opinion, what are the key issues the NDA should address and are they adequately covered by this Strategy?**

2.10. Unite believes that there is the need for a Geological Disposal Facility (GDF) as soon as is humanly possible. The Government's financial disposition should not come into the equation given that without such a facility there remains ongoing issues on the storage of highly radioactive materials and unprocessed spent fuel. Work on this facility began several years ago on public consultation but the proposals have not moved any further than this initial plan. At this rate, several stations will need to remain standing long past the end of their productive life simply because of the radioactive waste mountain it would create from all the irradiated steel and concrete.

**5/ The NDA is committed to reviewing the way in which we express the level of concern presented by a facility to help us prioritise our work and to track our progress in reducing the level of concern. What other aspects of progress would you like us to track? How would you like to be engaged in the development of this work?**

2.11. Unite is concerned that the decommissioned nuclear sites were never designed to hold radioactive material for such a long time. Unite refers to the legacy ponds and silos at Sellafield as a prime example. Whilst the sludge removal and maintenance of these facilities will aid in the monitoring of these tanks, they were never designed to hold waste for such a period.

2.12. Unite is pleased to see that the 400 tonne silo emptying plants has now been installed in the Magnox Swarf Storage Silo (MSSS). Whilst this a major step forward, it is a long way from a final solution.

**6/ Do you agree with our aspiration to re-use waste for a purpose on site (e.g. void filling and landscaping) where it represents a net benefit and allows the site end state to be achieved? What factors should we consider?**

2.13. Unite considers that where it is technically possible, to re-use waste without leaving behind a hazard to health. If it saves on the need to import fresh materials for the filling of voids and landscaping, then this possibility should be explored.

**7/ As well as ensuring that remediation of our sites is safe, sustainable and publicly acceptable, we also aspire to enabling their beneficial reuse as early as possible. What are your views on using controls (e.g. land use restrictions) to protect people and the environment from residual hazards so that the site can be used in a restricted way until it is suitable for unrestricted use?**

2.14. Unite considers that the site should be returned to as natural state as is possible so that the site can be more readily utilised in the future. This will require the removal of more contaminated material given wildlife and the weather will take no notice of signage and could in theory relocate materials that are left behind. It is far better to eliminate the issue rather than leave behind land with usage restrictions.

**8/ Do you think it is appropriate for us to seek interim uses of our land and in your opinion, what should these include?**

2.15. Unite does not consider it appropriate to seek interim uses of the land.

**9/ To support the development of a suitable range of treatment technologies we need to invest now in creative thinking and innovation to secure significant benefits in the long term. Do you believe the NDA should continue to adopt this approach recognising that there could be a short-term cost burden, as delivery of the next generation of treatment facilities will take time to implement?**

2.16. Unite believes that whenever you adopt a technology, the next generation to emerge will, in general, be an improvement on the older version. Using the excuse that you are waiting for the next generation to emerge before you commit is only an excuse to kick the decision and its cost implications into the long grass. Unite would therefore, suggest that the option which offers the greatest potential to be upgraded at minimal cost should always be the best starting position.

**10/ We implement the Waste Hierarchy and minimise the amount of waste we have to dispose of. However, to complete our mission we do need a range of disposal facilities to accommodate our diverse radiological and non-radiological waste inventory. Do you think our overall disposal vision is clearly articulated and do you support our key messages?**

2.17. Unite considers that the hierarchy that is currently in place is appropriate as it has become the well accepted and understood methodology norm, not just in the nuclear industry but in other related fields.

2.18. Unite believes that the processed useable remains of spent fuels and other fissionable material should not be treated as high level waste, but stored in an accessible area of a geological disposal facility. Even if these materials are never used for energy generation, the “waste” heat produced by these materials is needed by facilities that can extract CO<sub>2</sub> directly from the atmosphere and by community heating projects. Whilst the current focus has been of achieving net zero by 2050, the NDA should be looking way beyond the short term and consider that in the second half of this century the economy will need to be significantly CO<sub>2</sub> negative to offset the emissions we are allowing to take place until 2050.

**11/ How should we develop our HSSEW strategy to better support NDA group operations?**

2.19. Unite considers that the Health, Safety, Sustainability, Environment and Wellbeing (HSSEW) of its members are protected and believes the suggested strategy places too much responsibility on the individual to manage their own safety.

**12/ SAR is a new topic strategy for the NDA. Does it cover everything that you would expect? Should more emphasis be placed on group resilience?**

2.20. Unite considers that the NDA’s Security and Resilience (SAR) needs to be stronger in light of the Covid-19 pandemic and similar national and global factors which can have

impacted schedules on the finances of the NDA. Whilst Unite will support the plans to deliver an innovative security solution that will provide a more pragmatic and flexible approach to maintaining and supporting a secure working environment but does not feel that placing a greater emphasis on individual responsibility is something Unite can or will support. Unite understands that a chain will always fail at its weakest link but the responsibility for failures are down to a plethora of issues and mitigating factors.

**13/ *Cyber security is a new topic strategy for the NDA. What are your views on adopting this approach and what else should we be doing in this area?***

- 2.21. Unite understands that no secure system can be 100% secure as someone will always find that back door to bypass security. That said, by having a system that has no links to the internet or any wireless connectivity can cause issues in and of itself, especially when it comes to the use of thumb drives. These small finger sized storage devices can carry up to 2TB which is enough space for 100,000 songs, 150 movies and a bunch of other personal items and you would still have room for plenty of folders full of business Word files. With such a large capacity, it would only take one small drive to cause significant damage in the wrong hands. Even a drive the size of a thumbnail can hold 32MB of code. When you consider that the Apollo Guidance Computer had RAM of 4KB, a 32KB hard disk not only is the achievement of landing a man on the moon so much more impressive, but it is also frightening just how much data can be stored and carried in a pocket.
- 2.22. Unite therefore believe that given the above, Unite understands why individuals would need to be swept with a metal highly sensitive detection wand to guard against the transportation of data onto and off of any standalone system. That said, Unite would want to ensure religious beliefs, racial and gender sensitivities are respected at all times.
- 2.23. If the system is connected to the web or any wireless devices, there is a vulnerability which will need to be continuously monitored and upgraded as the evolution of often state sponsored cyber-attacks are becoming increasingly sophisticated. Given the nature of the work carried out by the NDA, it would be foolish to provide any details of the systems or measures in the public domain so that the strategies revealed are only a very broad brush in nature.

**14/ *What are your thoughts about the scope of the RD&I strategy going beyond traditional STEM subject boundaries? What areas of research would maximise benefits to the NDA group?***

- 2.24. Unite agrees that Research, Development and Innovation (RD&I) are fundamental to the delivery of the NDA work requiring much more than the basic knowledge of the Science, Technology, Engineering and Mathematics (STEM) subjects. Unite hopes therefore, that there will continue to be the opportunity for anyone within the organisation, be they a new starter or a veteran of many years of service with the required amount of determination, to train in any role in order to further their knowledge base and chosen career path.

**15/ Do you think the encouragement of a culture which promotes innovation is an important topic for the NDA, and do you support the approach being taken?**

2.25. Unite considers innovation as the cornerstone of any organisation but equally considers that once a programme has chosen a path, that this path is followed repeatedly to its conclusion. One major issue with the fleet of UK nuclear power stations is that no two are the same as there was no control over the application of new innovations. As a result, the unit cost of producing power from such a plant spiralled instead of reducing over time. Unite would therefore, see innovations as a potentially costly indulgence requiring a full evaluation of future costs before it is applied to any procedures.

**16/ We are keen to have greater diversity in the NDA group workforce; what more should we be doing to achieve this?**

2.26. Unite believes that to achieve a greater diversity, there is a need to introduce the work of the NDA to junior schools in communities with a more diverse population not just those in the areas around facilities. The role of public relations is critical to nurturing a community's interest about a career in any organisation and in encouraging the public acceptance of the work that the NDA in particular carries out.

2.27. Active participation and sponsorship of youth activities, sports teams, etc., only serves to raise public awareness of facilities in the community by holding open days and tours of facilities for the public etc. allow the public to see what is going on and some of the more obvious safeguards that are in play to prevent accidents.

**17/ How far should we engage our supply chain in meeting any future sustainability targets?**

2.28. Unite considers pressure from big business on their supply chains are critical to driving a sustainable future. Given the scale of the challenge to preserve the capability of the planet, we call home to preserve life as we know it, such engagement and monitoring is critical and should form part of any public facing report.

**18/ We are developing our group-wide digital vision; in your opinion, how ambitious should we be?**

2.29. Unite considers that the public perception of nuclear power and the decommissioning of power stations as a whole could do with some work in order to avoid opposition to any new plans, especially those surrounding the location of any NDA deep storage facility for high level waste and spent fuel. A group-wide digitalisation of the organisation could help but Unite feels that money may be better spent elsewhere.

**19/ How should we reduce the barriers for entry into the supply chain for local SMEs?**

2.30. Unite feels the way to encourage local small to medium enterprises is to engage with them on a personal level and work with them to see exactly what they can offer. If the NDA is to be accepted in an area, it is often the provision of employment from the local supply chains that can drive acceptability. Furthermore, if a product can be created

locally, then it should be encouraged as this will help build in reliability of supply and reduce the carbon footprint thanks to saved transport costs.

***20/ How can we involve more people in our work and better coordinate our engagement activities?***

2.31. In paragraph 2.24 above, Unite has outlined some of the more obvious activities that would encourage local involvement in the work of the NDA. Unite would also stress that the workers themselves have a vested interest in seeing that the NDA succeeds and hence should be consulted at every opportunity in staff bulletins or via workplace trade union representatives. The only other way would be an advertising campaign, using social media, leaflets and use of apps like Facebook, and Nextdoor as well as neighbourhood buying and selling apps like Shpock & Gumtree to offer free giveaways and promote tours and seasonal events etc. By coordinating activities with the trade union movement through open discussions it may be possible to coordinate.

***21/ We recognise the value of international engagement to our mission. Where our core mission allows, how best could we utilise the capabilities of the NDA group to progress broader UK interests?***

2.32. Unite and many UK trade unions are part of international groups like the ITUC, IndustriALL, etc. who work internationally with other trade unions on issues that impact the energy sector. If the NDA wishes to raise its profile on an international stage it could do so leading with the trade union movement to work jointly on any international engagement.



### 3. Conclusion

- 3.1. Unite supports the general principals behind the NDA's plans as highlighted earlier and would be happy to engage with them in order for the NDA's activities to be more socially acceptable.
- 3.2. Unite supports the call for a Geological Disposal Facility (GDF) as soon as is humanly possible to ensure there is capacity to decommission the high level waste that is created by the construction industry, medical activities, the UK military and energy industry. It is far better to store such hazardous materials as far away from other human or environmental contact until it degrades to a safe level. Storing such materials in one location is far more secure than at multiple sites.
- 3.3. Unite does not feel that spent fuel rods are waste material nor are other sources of fissionable materials capable of generating much needed additional electrical supply. Consequently, Unite would oppose their disposal into a sealed repository where it can no longer be accessed and put to use.
- 3.4. Unite also believes that there are a multitude of uses for the waste heat produced by the industry including:
  - Community heating projects.
  - Direct Air Capture (DAC) of CO<sub>2</sub> to help reduce its concentration in the atmosphere.
  - Green Hydrogen production.
- 3.5. Unite believes that if the NDA was able to provide this heating then it may be more easily accepted in the community.

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