

Priorities for Government.



Nuclear Industry Association

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FOREWORD BY TOM GREATREX

THE NEXT PARLIAMENTARY TERM WILL BE A CRUCIAL PERIOD FOR THE UK'S ENERGY INFRASTRUCTURE.

To achieve the goal of reducing our emissions to net zero we must decarbonise as fast as possible. We must also protect and enhance our quality of life by ensuring there is affordable power for homes, businesses, schools and hospitals, and jobs and career opportunities in the green economy.

There is an opportunity for this Parliament to set the blueprint for how the UK is to reach net zero, establishing a standard to be followed across the globe.

It means taking big decisions now to at least replace retiring nuclear power stations, securing long-lasting economic benefit and developing strong relationships with trading partners across the globe, whatever the nature of our relationship with the EU.

The UK's civil nuclear sector directly employs around 60,000 people in all parts of the country in a diverse range of highly skilled roles. Including indirect impacts boosts the figure to over 100,000, with a £12.4bn contribution to GDP and activity and benefits spread right across the UK. Our scientific, engineering and manufacturing expertise is highly sought after internationally.

Our current fleet provides around 20% of electricity production and nearly half of all clean power.

The first new build project for a generation is now under construction at Hinkley Point C, and will provide 7% of current electricity needs for 60 years. It is providing jobs and training for local people, and contracts for local and national UK supply chain companies.

Progress is being made at Sizewell C and Bradwell B and a fourth large-scale reactor design, the HPR1000, is now going through the Generic Design Assessment process.

However, during the last parliamentary term we have seen a nuclear new build project in Cumbria cancelled, and development on Anglesey and at Oldbury in South Gloucestershire suspended. A new lease of life for these projects, and the delivery of Sizewell C, needs a new financing approach to be implemented promptly. Done correctly this can help to deliver the investment needed and bring down the price to electricity consumers.

In addition to taking the steps needed to pave the way for a new fleet of large reactors there is the opportunity in future for the UK to be in the vanguard of developing small and advanced reactors, together with nuclear fusion, as well as using nuclear energy to unlock the potential of hydrogen. To deliver net zero by 2050 we will need all of these technologies, working together.

Since 2017 there has been further significant progress in decommissioning at sites across the UK. Providing focus for the supply chain, facilitating innovation and enabling our expertise to be exported to global markets will all help maximise value from decommissioning activity.

A strong pipeline of skills will continue to be needed to deliver the breadth of work in existing operations, new build and decommissioning. Our research and development (R&D) capacity will need to be developed in conjunction with skills.

The Nuclear Sector Deal has set important targets and kicked off activity across the industry to improve strategic co-operation, grow opportunities for UK industry, reduce costs and improve diversity of employment. It's important that our future industrial strategy maintains these priorities.

WE HAVE OUTLINED FIVE KEY AREAS FOR THE UK'S CIVIL NUCLEAR SECTOR WHICH AN INCOMING GOVERNMENT WILL NEED TO ADDRESS, IN CONJUNCTION WITH INDUSTRY, IF OUR POTENTIAL IS TO BE REALISED:

INVESTMENT STABILITY	Long term clarity on policy to enable investment
NUCLEAR INDUSTRIAL STRATEGY	A coherent future strategy for the nuclear sector
DECOMMISSIONING	Commitment to progressive decommissioning programme
SKILLS AND TRAINING	Encouraging STEM careers, enabling transition from other sectors and diversifying the workforce
FUTURE TECHNOLOGY	Supporting innovation and future generations of nuclear technology and fuels

The NIA and its member companies will continue to work constructively with the Government to deliver investment and jobs, build the supply chain in the UK and capitalise on emerging international opportunities. By working with industry to deliver on these five key areas, the incoming government will be able to maximise economic, industrial and employment opportunities, while making huge progress in the journey to net zero emissions.

**TOM GREATREX,
CHIEF EXECUTIVE,
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INVESTMENT STABILITY

TO PROVIDE ASSURANCES FOR DEVELOPERS TO ALLOW THEM TO DELIVER THE PROJECTS WE NEED TO MEET NET ZERO, THE GOVERNMENT WILL NEED TO:

Develop a new financing model for nuclear projects. Nuclear projects are capital intensive, but also create assets which produce significant amounts of clean electricity for at least 60 years. In addition to the current Contracts for Difference, a new financing model, such as a Regulated Asset Base, is required to reduce the costs to customers of new nuclear and enable the building of the large amounts of low carbon capacity we need.

Review what support can be made available to developers before Final Investment Decision. Getting projects to the point of Final Investment Decision (FID) can cost in the region of £3bn. This includes the cost of getting through Generic Design Assessment, conducting local consultations, and putting together a Development Consent Order application. Developers need assurances they can recoup these costs as projects progress.

Maximise the number of development sites. Since NuGeneration wound up operations at Moorside, the site has not been adopted by another developer. It's important this site, and other potential sites including wholly new ones, are linked with developers of both large and small & advanced nuclear reactors.

Ensure exit from the EU does not damage investment. The Government should maintain the strong progress made to ensure arrangements under the Euratom Treaty are replicated as far as possible should we leave the EU. It should also continue to work with industry to identify and address risks to workforce availability, in particular for nuclear new build construction, and for the movement of materials required to maintain the effective operations of our existing fleet.

IF THESE PROPOSALS ARE DELIVERED:

- There would be timely delivery of the nuclear new build programme
- The UK will attract the necessary investment to deliver net zero
- UK industry will be well positioned to become leaders in emerging technologies including small & advanced reactors, and nuclear fusion
- The UK will be seen as a global leader in R&D, attracting the brightest and the best to the UK and allowing technology for the next generation to develop in the UK

INDUSTRIAL STRATEGY

TO MAINTAIN PROGRESS MADE IN THE INDUSTRIAL STRATEGY THE GOVERNMENT MUST:

Adhere to 2030 targets agreed under the Nuclear Sector Deal to maintain the momentum and focus of Government and industry activity:

- 30% cost reduction in the cost of new build projects
- Savings of 20% in the cost of decommissioning compared with current estimates
- Diversify the workforce, by having 40% women in nuclear
- Up to £2 billion domestic and international contract wins

Maintain support for supply chain development to enable growth of UK civil nuclear capability.

Previous Governments have supported the growth of the UK nuclear supply chain through the creation of valuable programmes which have helped over 600 companies understand how they can get their business ready to bid for work on nuclear projects. This growth will enable the UK supply chain to increase the number of high value contracts it secures, across decommissioning and new build, as well as providing vital services to the existing nuclear fleet.

Support the development of local infrastructure to improve the deliverability of nuclear new build projects. The Government should consider prioritising communities hosting large infrastructure projects, such as nuclear plants, for additional local infrastructure investment. Associated infrastructure, including enhanced road, rail and sea links, are an important aspect of large projects and could usefully be co-ordinated in a long-term regional approach. A coherent and holistic approach must be taken to local development to ensure the right infrastructure is in place to meet local growth priorities.

Ensure skills are in the right place for cross-sector delivery of nationally significant infrastructure projects. There are potentially a number of large-scale infrastructure projects in prospect – nuclear new build as well as other energy infrastructure and transport construction projects – which will all compete for scarce skills and resources. Government should support co-ordination between industries in identifying requirements to help overcome this problem.

IF THESE PROPOSALS ARE DELIVERED:

- The UK supply chain will be able to develop and increase its capability, allowing more UK companies to compete for high value contracts and opportunities for export, and enabling the UK to become a key player in the global nuclear market
- The industry and Government will be able to support the improvement of local infrastructure, vital to the local regions, as well enabling the fast and efficient building of the nuclear new build programme
- The UK will be able to guarantee all nationally significant infrastructure projects have the right amount of resourcing to ensure they can be delivered on time

DECOMMISSIONING

TO ENSURE THE COMPLETION OF THE UK'S DECOMMISSIONING PROGRAMME SAFELY, COST EFFECTIVELY AND SECURELY, THE GOVERNMENT MUST:

Maintain funding for the Nuclear Decommissioning Authority (NDA). Nuclear decommissioning is a multi-administration and multi-generational task that cannot be left to the future. Good progress is being made in reducing the risks and hazards at the NDA sites around the UK. To continue progress at sites across the country the Government should maintain the funding provided by the Department for Business, Energy and Industrial Strategy. Priority should continue to be given to high hazard areas of work, particularly on the Sellafield site.

Promote R&D to help create innovative technologies to accelerate the decommissioning process. Support companies to develop new technologies to accelerate decommissioning, benefiting the UK and the international decommissioning industry.

Guarantee long-term work programmes to safely manage UK waste. Maintain stability in decommissioning and the supply chain, while preparing for the defueling and decommissioning of the UK's AGR fleet, amongst other projects.

Continue support for Radioactive Waste Management (RWM). As the organisation in charge of delivering a Geological Disposal Facility, support must be maintained from Government to ensure the projects remains on track and keep to timelines.

IF THESE PROPOSALS ARE DELIVERED:

- There would be cost-effective decommissioning of Europe's most complex nuclear site – Sellafield
- UK supply chain companies will continue to invest in their businesses to provide goods and services for the UK and international decommissioning market
- Preparation for moving Magnox sites into Care and Maintenance so that final dismantling work can take place
- The industry will be able to maintain and increase the current pace of decommissioning, safely, securely and cost effectively using technology and innovation to help to protect the public purse, allowing land to be released back to the public for re-development
- A site will have been chosen to host a Geological Disposal Facility, in collaboration with local communities, making significant investments to the host area

EDUCATION, SKILLS AND EMPLOYMENT

TO CREATE A SKILLED WORKFORCE TO SUCCESSFULLY DELIVER THE UK'S NUCLEAR, LOW-CARBON ENERGY FUTURE, THE GOVERNMENT MUST:

Support the diversification of the workforce beyond the gender targets in the Nuclear Sector Deal.

While the aim of having 40% women in the sector by 2030 is an ambitious one, there should be ambitions to diversify the workforce by attracting those from a greater variety of backgrounds.

Ensure more focus is placed on STEM subjects at a young age, through the national curriculum, to encourage students to study these important subjects. The National Skills Strategy Group's national workforce assessment projects a growth in total employment in nuclear, including defence, rising from 80,000 in 2015 to 110,000 in 2021. By encouraging young people to consider STEM subjects through the curriculum and careers guidance, the UK can begin to fill this gap.

Guarantee continued support to high skilled, high valued, apprenticeship and graduate schemes to encourage young people into the nuclear sector. Apprenticeships are a popular entry point for many in the nuclear sector, with companies such as EDF Energy and Sellafield Ltd running extensive programmes. In addition, the NDA oversees the running of the *nucleargraduates* scheme and support for this should be maintained.

IF THESE PROPOSALS ARE DELIVERED:

- There will be an increased number of young people entering the nuclear industry, reducing the age profile and improving diversity, and creating a pipeline to help build and operate the new nuclear build programme
- The workforce will grow through apprenticeships for new build, decommissioning and existing operations; ensuring companies do not have to look overseas to deliver contracts or maintain our fleet of reactors
- The UK's skilled workforce will strengthen Britain's place amongst global leaders of nuclear power; promoting the UK's educational facilities, universities, apprenticeship programmes and R&D facilities as centres of excellence

FUTURE TECHNOLOGY

TO DELIVER THE FUTURE GENERATION OF NEW NUCLEAR, THE GOVERNMENT WILL NEED TO:

Support nuclear R&D. In 2015 the Government committed to spend £250m on nuclear R&D over 5 years and most recently pledged further funding to support the development of fusion technology. This direction should be maintained and the recommendations of the Nuclear Innovation and Research Advisory Board (NIRAB) followed.

Develop a programme for small and advanced reactors. The Government must make sites for such technologies available to developers, and make decisions on several policy areas which are already in the pipeline, such as selecting technologies for the next round of advanced reactor funding under the Nuclear Sector Deal, and making slots available to companies to submit their designs for the Generic Design Assessment (GDA). Any delay in this area risks the UK losing its competitive advantage globally.

Make a final decision on its strategy for dealing with the UK's plutonium stockpile. A decision must be made early in the next Parliament so appropriate actions can be taken to address this legacy, with the potential to use this new fuel in new advanced reactors. This will allow the NDA to more accurately budget for storage costs of this material.

Agree to increased funding for the Office for Nuclear Regulation (ONR). The ONR is highly regarded both in the UK and internationally, and underpins the industry's activities both at home and overseas. The UK's nuclear new build programme and other programmes will put additional pressures on the ONR and it is important it has the resources to deal with them.

IF THESE PROPOSALS ARE DELIVERED:

- The UK could be a world leader in small/advanced reactor and fusion technology, providing an important export opportunity for the UK industry
- The UK will be able to safely and securely manage its plutonium stockpile. Contributing to national security by placing the plutonium into an irreversibly safe and proliferation-resistant state while potentially providing low-carbon energy to the grid will help to meet the UK carbon reduction targets and improve security of supply
- The UK will set an example in the international non-proliferation debate, creating a role model for others to follow
- The UK's nuclear supply chain will continue to strengthen and grow, providing further exportable potential