The Nuclear Industry Association (NIA) is the trade association for the UK’s civil nuclear industry. We represent around 250 members who operate across the supply chain.

We were happy to hear in his speech last week, the Prime Minister say that nuclear was considered a vital part of the low-carbon energy mix. With Net Zero and the Government’s aim for a green recovery post-COVID-19 in mind, this intent should now be turned into action.

Today in the UK, the nuclear industry provides nearly half of our clean electricity, powers one in five homes across the UK, prevents 20 million tonnes of CO₂ emissions annually – equivalent to taking a third of all cars off UK roads – and employs 60,000 people directly, while supporting a further 95,000 indirect jobs across the UK in nuclear fuel manufacturing, operation, new build, construction, decommissioning, and associated activity.

Taking into account the entire end-to-end process from mining to decommissioning, it has the same carbon footprint as offshore wind, and a third that of solar power. It is non-weather dependent and its technical characteristics, unique amongst low carbon technologies, contribute to the stability of our national electricity grid.

The NIA believes that nuclear represents a multi-billion-pound economic stimulus opportunity as the country looks to rebound from the impact of COVID-19 and establish strong and enduring global trading relationships.

Large GW scale projects bring major investment, each with over 20,000 roles in construction, including around 700 apprentices per-project and over 800 long-term jobs during operation. New nuclear projects have beneficial supply chain impacts on major strategic industries, for example UK steel, with 200,000 tonnes of Welsh steel being used on the Hinkley Point C project alone.

With Government and industry collaboration, shovel-ready large-scale projects, such as Wylfa Newydd and Sizewell C, with Bradwell B in the pipeline, will provide the economic boost to regions across the UK in need of levelling up.

The UK already plays a major role in the international decommissioning market, and this will only increase as other countries’ plant also retire. Technologies and expertise developed in the UK have been successfully deployed in highly hazardous and complex sites around the world, saving those nations years of R&D, significantly reducing any further risks.

Our growing expertise in the next generation of nuclear technologies includes small modular reactors, Advanced Modular Reactors, and Fusion, where we are already world leaders. This will enable the UK to
develop and sustain a global leadership position, opening up new export markets, which Rolls-Royce estimates to be worth £188bn for their technology design alone.

As has historically been the case, a future investment programme in the nuclear industry will drive regional economic growth, innovation, and centres of excellence beyond metropolitan areas. The North West Nuclear Arc spanning from Anglesey in North Wales, across to Manchester and beyond to West Cumbria is well placed to benefit, along with the East and South West of England.

Nuclear power’s potential extends beyond traditional electricity generation. There will be an increased role for hydrogen in our future energy mix for heating homes where direct electrification isn’t possible, and to replace petroleum products in long-distance transport.

In aerospace, shipping, heavy freight and some agricultural uses – where pure hydrogen and batteries are unlikely to support decarbonisation – there is the potential to develop synthetic and lower carbon fuels, avoiding the need for major vehicle adaptation, through nuclear power.

The right support and intervention by the Government today will not only support a green economic recovery in the short-term but help the UK reach long-term targets, like Net Zero by 2050. By 2050, nuclear could deliver up to 40% of the low carbon power to a net zero economy, be worth more than £33 billion in Gross Value Added annually and provide well over 300,000 job opportunities.

In our recent 40’ by 50: The Nuclear Roadmap report, the NIA outlines the potential contributions of the UK nuclear industry to reaching Net Zero and details short-term recommendations for Government in order to reach these ambitions:

- The Government should articulate a clear, long-term commitment to new nuclear power
- Progress must also be made well before the end of this year on an appropriate funding model for current nuclear new build projects to stimulate investment in new capacity and reduce the cost of capital (thus the cost of the electricity to levels competitive with renewables without the hidden costs of intermittency)
- A National Policy Statement on small reactors
- Support the 2030 targets of the Nuclear Sector Deal
- Industry and Government should agree a framework and commitments, focused on cross-sector collaboration

Taking these steps now will not only help stimulate the potential of the nuclear industry in supporting a green economic recovery but ensure the future success of a clean energy mix. Without nuclear the UK will not achieve Net Zero by 2050 without major risk and significant, needless cost to the economy and our competitiveness. A thriving nuclear industry can also help secure major domestic investment, maximise export potential and lock in a pipeline of engineering innovation which will deliver high quality, inspiring jobs for future generations, in every nation and region of the UK.

The nuclear industry is ready to tackle the challenges of today, as well as those of the future.

Yours sincerely,

Tom Greatrex,
Chief Executive, Nuclear Industry Association