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### **Nuclear Industry Association's (NIA) Budget Representation 2020**

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.

#### **Overview**

The civil nuclear industry – an integral part of the UK's energy system for over 60 years – currently generates 20% of our electricity, employing 60,000 people directly and supporting a further 95,000 indirect jobs across the UK in nuclear fuel manufacturing, operation, new build, construction, decommissioning, and associated activity.

When the UK Government legislated for a binding target of net zero carbon emissions by 2050, it did so as one of the first nations to set that ambition into domestic law, signaling to the rest of the world that the time for positive action is now. If the UK is to meet net zero, then nuclear power is ready and able to play its part in enabling decarbonisation – both as an emissions free way of generating constant power, and as a primary fuel, as low carbon electricity becomes an increasingly important and essential player in the UK's clean energy mix. Nuclear provides safe, low carbon, non-weather dependent, firm electricity which can support a decarbonised electricity mix in the UK as renewable power expands.

The Committee on Climate Change's Net Zero report recommended that a future energy mix should be made up 38% firm power, of which nuclear is the only proven, commercially viable option. A recent report, 'Absolute Zero' (UK Fires, 2019), debated in the House of Lords, said that we do not have time to wait for breakthrough technologies to meet net zero and we must rely on what we already have.

Nuclear is available now.

Before the end of this decade, however, all but one of the UK's operating nuclear power stations will be due to retire and we currently only have one new build under construction at Hinkley Point C. Without the right policy framework and investment model in legislation, then replacing this capacity and underpinning our future power needs becomes impossible to achieve.

## **Investment stability**

To enable the investment required for large-scale electricity infrastructure, there is an urgent need for the introduction of a new, robust financing mechanism which ensures investor confidence, reduces the cost of capital, and provides very significant value to the consumer. The timing of the implementation of such a financing model is critical in ensuring the stability of the UK nuclear supply chain and workforce, and in delivering value for money to the national economy. The business case for the Sizewell C project, for example, is dependent on the transfer of operations in a timely fashion from Hinkley Point C. The Horizon site Wylfa Newydd, which was suspended in January 2019, also depends on a more favourable financial model than the CfD arrangements if it is to restart, for which it has retained capacity.

The NIA therefore requests that the Government responds to the RAB model consultation and works with the industry on developing a robust financing model that will help to deliver on key pillars of the Nuclear Sector Deal and that new financing model is in place before the end of 2020.

Last year, the National Infrastructure Commission advised that the UK needed to build only one more large-scale nuclear power station after Hinkley Point C. This conclusion is fundamentally flawed – not least because the assessment takes no account of the now legislated net zero commitment. It is important that the UK Government's infrastructure plans are consistent with decarbonisation, which underlines the need for a programme of nuclear new build projects. The detail, including a target range for nuclear new build, should be set out in the anticipated Energy White Paper, which the Government has previously stated will be published shortly.

It is clear that replacing the primary energy currently provided by fossil fuels is a perfect fit for nuclear – this can generate heat which could be used either as heat itself or to generate electricity; modern reactors can generate high-temperature heat which can produce hydrogen. Nuclear, along with renewables, are the only sources of primary energy available to the UK.

The NIA also requests that the Government respond to its consultation on the future of UK carbon pricing as soon as possible. As well as this, the Chancellor should set the rate of Carbon Price Support in his upcoming Budget. Setting these policies will help send the right signals for investment into long-term low carbon infrastructure.

## **Nuclear Sector Deal**

In 2018, the nuclear industry and the Government agreed the Nuclear Sector Deal, that set a series of targets which will help ensure that the UK continues as one of the leading nuclear nations and maximises the economic potential of the UK's nuclear sector.

Work being undertaken by the industry towards achieving the 30% reduction in new build costs by 2030 can only be realised with a programme of new build activity to address those cost reductions. Without a strong sense that the UK requires that new capacity, then investors and developers will lose interest. While industry is addressing a number of aspects of costs of new build, a different financing mechanism which enables a significantly reduced cost of capital, is an essential element of meeting the Sector Deal's commitments.

Large-scale nuclear projects, small modular reactors, and then potentially advanced reactor designs and nuclear fusion, all have a part to play in providing the level of firm power the country will require to meet both net zero and the demand that society places on the availability of secure and reliable power. Further, the development of smaller reactors will enable more skilled manufacturing and engineering jobs to be developed in a UK supply chain and provide significant export potential.

Currently, the nuclear sector's economic footprint providing tens of thousands of jobs across a diverse set of regions in the UK, particularly in the North West and South West of England, with local communities at

the heart of what we do. Projects like Hinkley Point C and Wylfa Newydd have invested in their economies by providing jobs to local people, and in the case of the former, setting up education institutions to establish the next generation of talent for the industry.

The delivery of the Nuclear Sector Deal is therefore essential if we are to tap into these opportunities and level-up the UK economy.

### **Small reactors**

As well as a large-scale new build programme, the UK nuclear industry also has several promising small reactor designs – both LWRs and advanced technologies – in development. No country has yet deployed a fleet of small reactors, although many are moving ahead with development programmes, giving the UK a strong chance of becoming a world-leader in this technology if we act quickly.

In September 2018, the UK Government announced its advanced modular reactor (AMR) competition, for which its applicants and the wider industry are still awaiting the results. We ask that the Government announce the shortlisted technologies for round two of the funding as soon as possible so that the industry does not miss out on the opportunities available from the development of these reactors.

### **Nuclear decommissioning**

The UK remains one of the world's best in decommissioning, driving the development of skills and innovation across the country in an emerging global market worth hundreds of billions of pounds. The nuclear industry has worked hard to create the UK's first National Decommissioning and Waste Management Pipeline as part of delivering the Nuclear Sector Deal. The UK Government should continue its sustainable and reliable funding to the Nuclear Decommissioning Authority in order for the country and nuclear sector to continue to benefit from this flourishing enterprise.

It is now essential that the UK develop a Geological Disposal Facility to responsibly look after the industry's radioactive waste. The NIA therefore looks forward to publication of the Government's GDF Site Evaluation Framework in the coming months, as progress on this facility is needed imminently as the net zero economy grows.

A handwritten signature in black ink, appearing to read 'Stone', with a large, sweeping flourish underneath.

**Dr Tim Stone**

**Chairman, Nuclear Industry Association**