



Nuclear Industry Association

5<sup>th</sup> Floor, Tower House,  
10 Southampton Street,  
London WC2E 7HA

TEL +44(0)20 7766 6640

EMAIL [info@niauk.org](mailto:info@niauk.org)

VISIT [www.niauk.org](http://www.niauk.org)

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### **BEIS consultation: Regulated Asset Base model for nuclear**

1. The Nuclear Industry Association (NIA) welcomes the chance to respond to the Government's consultation on a Regulated Asset Base (RAB) model for nuclear.
2. The NIA is the trade association and representative body for the civil nuclear industry in the UK. We represent around 260 companies operating across all aspects of the nuclear fuel cycle, including the current and prospective operators of nuclear power stations, the international designers and vendors of nuclear power stations, and those engaged in decommissioning, waste management and nuclear liabilities management. Members also include nuclear equipment suppliers, engineering and construction firms, nuclear research organisations, and legal, financial and consultancy companies.
3. Several of our members will be making their own, detailed responses to this consultation. The focus of this submission is therefore on high-level, industry-wide matters.

### ***Overview of the role of nuclear of the UK's future electricity mix***

4. Nuclear is essential to the UK's decarbonised electricity mix, with the Committee on Climate Change stating "power sector decarbonisation does not rely on variable renewables alone, but a portfolio of technologies including nuclear power", and that 38% of our electricity should come from 'firm' low carbon sources. Nuclear is the only proven source of low carbon generation and its role in the energy mix has been supported by multiple reputable institutions, including the OECD, IEA (2019), EIB (2019), IPCC (2018), MIT (2018).
5. By 2030, all but one of the UK's nuclear power plants will have retired and the current Contract for Difference (CfD) model has only delivered one new nuclear project, Hinkley Point C. 13 coal and oil, and 32 gas powered stations will also close by 2035. To reach net zero, we need to replace this significant capacity gap with clean sources of electricity.
6. The push to decarbonise will also mean the difference between energy and electricity will become negligible as heating and surface transport become electrified, and the National Grid's *Future Energy Scenarios* forecasts peak electricity demand increasing by over 40% to nearly 85GW by 2050. It should be noted this figure does not include the amount of clean power needed for the electrolysis of hydrogen (H<sub>2</sub>).
7. This future electricity supply must consist of a mix of technologies which can collectively provide a clean, stable and cost-optimal source of electricity. Nuclear has an essential role to play in



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complementing the development of clean renewables such as wind and solar by providing a virtually continuous supply of low carbon electricity.

8. As we have seen over the past few years, the CfD model has major limitations as a financing method for new nuclear projects, as evidenced by Horizon Nuclear Power suspending its nuclear development programme after years of significant investment and progress in its new nuclear projects and Wylfa and Oldbury. The RAB model would provide assurances to investors beyond the scope of the CfD.
9. While we feel positively about the Government's interest in the implementation of a nuclear RAB model, it should be recognised that a new funding model alone will not deliver new nuclear or restart suspended projects, and other barriers to investment need to be addressed in conjunction with the application of this model.

***Have we identified a model which could raise capital to build a new nuclear power station and deliver value for money for consumers and taxpayers?***

10. The nuclear industry believe BEIS has identified a viable funding model in the RAB, which could significantly reduce the cost of capital by attracting investors satisfied with a secured, lower rate of return, helping to reduce the overall cost of nuclear new build while attracting large sums of private capital, and protecting consumers with thorough regulation and safeguards.
11. Under the RAB model, investors would see a return at earlier stages of the project in a more regulated fashion which would address many of the risks faced by investors under the CfD model. Securer payments would encourage a wider pool of investors, for example pension funds and the insurance sector.
12. The RAB model has already been successfully implemented in the construction of other large infrastructure projects, including the UK's energy networks infrastructure, Thames Tideway Tunnel (TTT) and Heathrow Terminal 5, and is widely used internationally. Therefore, it is familiar to the investment community.
13. The RAB model is particularly suitable for proven technologies, which do not bear heavy research and development and the associated licensing costs. If implemented in a timely manner, the model could have a positive effect across the UK nuclear supply chain through continued business for SMEs.



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14. However, as the proposed mechanism is still high-level, we ask that the model remains flexible for all types of nuclear new build projects, including the pre-FID development phase and small reactors. The CfD should, however, still be available for small nuclear.
15. If applied to nuclear successfully the RAB model could also be applied to the wider energy sector and other large-scale investments for projects that will be needed to meet the UK's net zero targets.

***Do you have any comments on the components of the Economic Regulatory Regime as described?***

16. The NIA welcomes the fact that the proposed Economic Regulatory Regime (ERR) includes a traditional “regulated return” framework with components familiar to investors. However, the proposed ERR should provide for RAB licenses and ERR support during the project development phase, in addition to the construction and operational period, while balancing the necessary levels of consumer protection.
17. In order to thoroughly prepare and de-risk a nuclear construction project and ultimately reduce overall project costs, significant development phase spend is required.
18. There is a clear precedent for a RAB model to be applied before the construction phase of a new nuclear project, as evidenced with other large infrastructure projects, such as TTT and the third runway at Heathrow. Over £1bn was spent under the RAB before construction began on TTT and £2.9bn has already been spent or is currently predicted to be spent at Heathrow. Without covering the development stage of new nuclear projects, many would struggle to even reach the construction phase. For example, Wylfa has spent some £2bn, all of it at risk, with additional costs in the advanced design and pre-construction planning. Implementing a RAB model for this project in the pre-construction phase would likely have significantly benefited the development of the Wylfa site.
19. Therefore, a nuclear RAB model must clearly recognise the large upfront costs in nuclear projects.
20. When BEIS appoints an economic regulator, it should be a well-respected, independent organisation with a fluent understanding of the electricity sector and a track record that can ensure investor and public confidence. It is important the economic regulator can act objectively and without distraction.
21. Confidence in the regulator is essential and the NIA believes an existing body would be more suitable for the role. To set up a new body would take time and, as already discussed in this



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response, timing of the implementation of the RAB model is crucial to its success in the nuclear industry. This could, for example, be Ofgem.

***Do you agree that consumer risk sharing could be value for money for consumers if it achieves a lower expected overall cost for consumers compared to a Contract for Difference model?***

***Do you have views on our proposed approach to assessing a new nuclear project under a nuclear RAB model and determining whether it is value for money for consumers and taxpayers?***

22. While consumers will face costs during the development and construction phases under the RAB model, the lifetime consumer benefit which results from a reduced cost of capital and a significant increase in the likelihood the UK will reach net zero by 2050, should outweigh the short-term risk of cost to consumers.
23. More clarity is needed on what is meant by 'value' for the consumer. This cannot just be measured by cost to the consumer but the wider societal benefits: jobs and skills; growth to the local economy and supply chain; security of supply and the decarbonised electricity generation that new nuclear projects can bring to the UK.
24. The Government should also consider the value of the project after construction. Once built, nuclear power stations are assets which consistently and reliably provide energy for at least 60 years. Of all the low carbon projects currently being built, only one will survive past 2050 and not need to be rebuilt – Hinkley Point C. The lifetime of nuclear power stations spans generations with proportionately increased value for consumers and taxpayers.
25. The timescale of implementing the RAB is crucial in ensuring the industry can maximise the benefits of transferring the workforce between projects and delivering value for money to the consumer. In the case of Sizewell C, for example, the current business case for its development relies on a specific timetable, with a Final Investment Decision at end of 2021 or early 2022. This would allow for the smooth transfer of the skilled workers and supply chain from HPC to Suffolk. A smooth transition would maximise the benefits of the repeat-effect. Such a transfer depends on the willingness of Government to facilitate a new financing arrangement to meet the above timetable. Maintaining nuclear supply chain confidence and stability is also essential for the future of a UK fleet.