

Written evidence submitted by *newcleo* (IND0038)

About *newcleo*

[newcleo](#) is a rapidly growing Advanced Modular Reactor (AMR) developer and Europe's fastest-growing and most privately backed energy start up. We have over 1,000 employees in the UK, France, Slovakia, Switzerland and Italy. We have three UK offices in Manchester, Gloucester and London and have successfully raised more than €535m since our launch in late 2021. As such, we are able to develop new advanced nuclear power in the UK, independent of the need for funds from the UK's taxpayers.

Our fleet of Lead-cooled Fast Reactors (LFRs) will be fuelled by Mixed Oxide (MOX), a combination which promises to address the traditional challenges associated with the industry of cost, safety and waste.

We anticipate **that our first of a kind commercial-scale (200MWe) reactor could come online in the UK as early as 2033**. Subsequently, having demonstrated the strengths of our technology, we will deploy further reactors, coming online progressively to generate up to 4GWe by 2050 in the UK and powering up to 8 million homes here. We also see these reactors playing a valuable role in the powering of AI and data centres and creating thousands of new jobs across the UK supply chain.

We were pleased to [announce](#) in December 2024 that we have submitted an application to the UK Department of Energy Security and Net Zero for approval to enter the Generic Design Assessment for our LFR-AS-200 small modular lead-cooled fast reactor. This is a significant licensing step and means ***newcleo* are now the only advanced modular reactor developer to submit applications for both GDA and Regulatory Justification Decision in the UK.**

Overview

Given *newcleo*'s ambitions in the UK and the recognition by the UK Government of the critical role that new nuclear will play in the UK's future energy mix, we are grateful for the opportunity to submit to this inquiry and for the Committee's consideration of our perspectives.

We outline our responses to the questions most relevant to *newcleo* below.

newcleo's submission

How can UK plc capture its fair share of the economic potential of emerging or less developed energy technologies?

As a leading advanced new nuclear energy developer, *newcleo* welcomes that clean energy industries have been identified as one of eight key sectors as part of the Government's initial analysis to identify growth-driving sectors as part of the new Industrial Strategy. As the Government has rightly recognised, in order to make Britain a clean energy superpower, the country requires a British-based clean, homegrown energy in order to meet the ambitious target of deliver clean power by 2030. The UK clean energy industry will not only ensure net zero targets are

met, but boost energy independence, protect our energy security, and support jobs across the country.

While an energy mix is essential to deliver the country's energy supply, a wealth of evidence shows that nuclear is the UK's only proven source of clean energy that is available 24/7, powering 12 million homes. Furthermore, the nuclear industry has a long history of supporting UK economic growth, with the Nuclear Industry Associations' most recent jobs roadmap showing that the industry generates £6.1 billion in GDP for the UK economy, supports tens of thousands of jobs, and generates a substantial stream of £4.5 billion in tax revenues for the Exchequer each year.

Crucially, in addition to the growth benefits brought by current nuclear capacity, there is significant economic potential in new nuclear technologies across the UK, including small modular reactors (SMRs) and advanced nuclear reactors (AMRs). With the country's wealth of nuclear expertise, heritage and talent, the UK is already a key investment target for sizeable private investment for developers, as showcased by *newcleo's* own offering.

However, while the investment appetite is already there, new nuclear developers still require significant support from UK plc and Government alike to provide long-term investment security. Last week's [announcement](#) from the Prime Minister is a welcome first step toward approving new nuclear sites across England and Wales, but further investment signals are required to support the complex and ongoing site purchasing process.

The future potential for economic growth, job creation and energy security of AMRs must be explicitly considered within the Government's Industrial Strategy, as this will give developers the green light required to make long-term investments in UK nuclear infrastructure and emerging technologies.

What more can the Government do to encourage greater domestic supply chain investment in the energy industry by 2035, including through the Contracts for Difference scheme?

Despite the positive indicators, several practical barriers still exist, impeding *newcleo's* ability to secure a UK site and kickstart growth. While we continue in our attempts to drive forward our first UK reactor, our challenges can be summarised as a lack of pace, clarity and framework.

One of the key issues in the funding of UK nuclear projects has been the lack of certainty through almost the whole development period for a private developer. **Until the relevant government agreements are finalised (i.e., Government Support Contracts including revenue support, nuclear liabilities, spent fuel and decommissioning agreements), the developer carries the full abortive cost liability of development.**

This is exacerbated by the lack of line-of-sight for a developer of the route to market nor how high the bar is or may be set in the future. Without clarity on a route to market it is exceptionally challenging for new nuclear developers to arrive at the point of Final Investment Decision. With this in mind, please see *newcleo's* calls to government below:

Unlocking sites and visible Government support.

Whilst we warmly welcome the Government's 6 February 2025 announcement re its proposed (more permissive and relaxed) siting policy for new nuclear (including for SMRs and AMRs) and whilst we, ourselves, are advancing discussions to secure at least one non-nuclear site to locate our first commercial reactor(s) in the UK, we (and others in the industry) have still been unable to meaningfully rule out opportunities on existing nuclear sites (such as EDF's Heysham) since no party (whether private or Government) seems able to make any move whilst GBN is considering sites for their Government backed projects.

If we are to meet our target to deliver a first new 200MWe reactor in the UK by 2033/4, **we urgently require the Government's assistance and convening power to bring together the key stakeholders required** (*newcleo*, DESNZ, HM Treasury and GBN amongst others) to help us conclude on the suitability of sites realistically available to us, unblocking our (and the industry's ability) to make deals / acquire sites and start developing in H1 this year.

A number of new nuclear developers are ready to commit substantial private funding to new development sites and create thousands of much-needed jobs in local areas and UK supply chains. Whilst the newly-announced siting plans are very much a step in the right direction, we still need to accelerate their adoption into official policy as soon as possible. In terms of wider technology adoption for advanced nuclear developers such as *newcleo*, we also request that you the establishment of a process that permits and endorses the development of new privately-funded new nuclear development which runs parallel to (and does not simply follow sequentially) the existing negotiations regarding large GW developments and SMR competition.

Put simply, the siting policy for Government seems to be moving to a much more permissive and enabling policy; we now need to ensure that technology adoption and development for any new SMR or AMR technologies follows a similar path and is not subject to a long-drawn out (and delayed) 'competition' as has been the case for the SMR competition which is due to take 2 years from its launch to completion.

Clarity on price and economics of development.

We (and others in the AMR sector) call for the Government to commit to and enable early and progressive agreement (e.g. between *newcleo* and Government) regarding the revenue support mechanism available for our project (e.g. Regulated Asset Base or Contract for Difference), without which development is solely at our risk for an extended period and at significant cost.

Indeed, a template 'contract for difference' solution with standard/ reference form could be made available for all (with a capped power price subject to value for money tests) which could open the floodgates to foreign investment into UK nuclear by bounding the risk and giving a clear route to market.

Does the UK have the supply chain capacity to deliver the required energy infrastructure by 2035, including an expanded electricity network?

The UK currently has five operational nuclear power plants owned by EDF, with a total capacity of 5.9GWe and has generated a fifth of the UK's electricity a year. However, all are now reaching the end of their operational lives. In 2022, UK nuclear output fell to its lowest level since 1982 and has

continued on a steady decline since. In 2024, power output from the UK's nuclear power plants slumped to the lowest in more than four decades , potentially increasing reliance on fossil fuel.

Yet with the potential of new nuclear technologies, including *newcleo*'s site ambitions, alongside the Government's ongoing SMR competition due to be finalised in Q1 2025, the UK's historic nuclear infrastructure and expertise can be harnessed to deliver new nuclear projects that will place Britain at the forefront of the new nuclear age. New nuclear developers are committed to bolstering the supply chain, creating thousands of jobs across Britain's industrial heartlands in order to deliver new energy infrastructure.

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