NATIONAL WEALTH FUND

Nuclear Energy

Sector focus

November 2026



Supporting a new era of UK nuclear investment

Our mission

The National Wealth Fund's mission is to invest in infrastructure, supply chains and businesses across the UK, driving more than £100 billion of finance into the UK economy by the end of 2030/31 to unlock long-term economic growth and accelerate the transition to clean energy. As one of the UK government's Public Financial Institutions we bring together the strengths of both the public and private sectors to unlock the UK's future.

Our clean energy ambition is to support the transition to a secure, low-carbon energy system by investing in the infrastructure, technologies and supply chains needed to deliver clean power, strengthen energy security, enabling decarbonisation across the economy and with the potential to lower bills for households and businesses

Recognising the scale of investment required, we seek to address financing barriers and crowd in private capital to help sectors develop and grow over time.

Find out more about our strategy and priority sectors.

At a glance

Nuclear is central to the UK's ambition for clean, secure energy. Recent estimates suggest the UK may require a further 14-18GW of new nuclear capacity by 2050, which will require substantial investment and long-term commitment from both the public and private sectors.

The National Wealth Fund is well placed to help strengthen the UK's sovereign nuclear capability, building on our investment in transformational deals such as Sizewell C and Rolls-Royce SMR. We can help accelerate deployment, crowd in private capital, and alongside partners, help build a resilient nuclear sector.

Our approach

We will consider investments across our entire product suite to support commercially viable proposals in nuclear. We have a particular focus on projects in the UK Advanced Nuclear Pipeline as well as opportunities to support supply chain development. We will also engage with fusion supply chain and spin-off technology opportunities that support the UK's sovereign and strategic capabilities.

Key enablers

We will work closely with GB Energy – Nuclear, DESNZ, UK Atomic Energy Authority, UK Industrial Fusion Solutions and the Office for Nuclear Regulation to identify opportunities and align with government policy.

Market overview

Nuclear occupies a distinctive role within the energy system. Alongside renewables, storage and networks, nuclear provides firm low-carbon power that strengthens energy security, supports system resilience and underpins long-term economic growth. The UK has established a track record in nuclear energy, with capabilities spanning power generation, regulation, nuclear fuel, decommissioning, engineering and advanced technologies.

In recent years, the Government has committed to large-scale and advanced nuclear technology, demonstrated by public investment in Sizewell C, alongside the selection and backing of Rolls-Royce small module reactor (SMR).

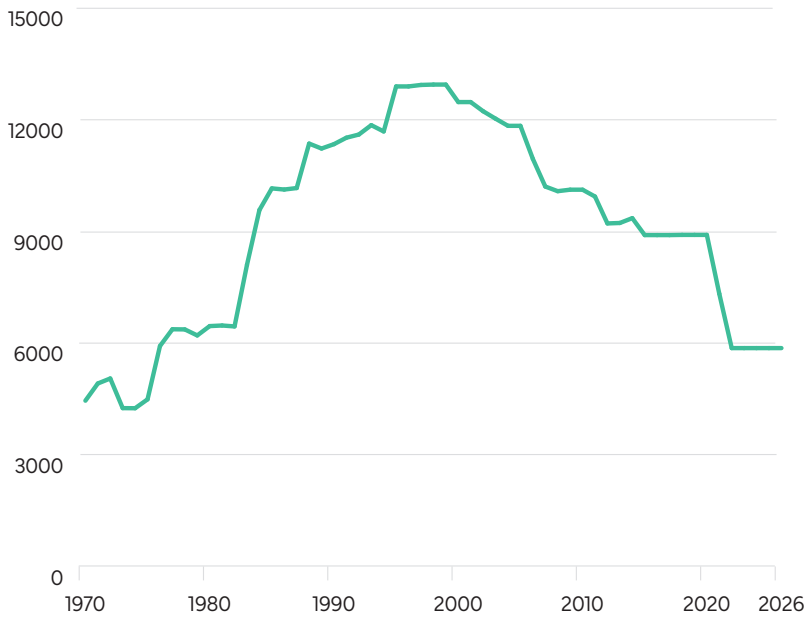
The nuclear market is increasingly shaped by two sources of demand: system-wide requirements for reliable low-carbon baseload power, and emerging demand from large energy users seeking long-term power security. The interaction between grid-based demand and private offtake opportunities will be an important factor in determining the pace and scale of future nuclear deployment.

In the UK, the nuclear sector is entering a period of transition. As outlined in the Government's recent report on nuclear regulation, most existing capacity is to be retired by the end of the decade and the decline is already happening.

While the new generation of nuclear plants are under construction, current market estimates suggest that, in addition to Hinkley Point C and Sizewell C, the UK may require a further 14-18GW of new nuclear capacity by 2050.

Total operable nuclear capacity, 1970-2026 (MWe)[1]

The UK generates about 12% of its electricity from about 5.9 GWe of nuclear capacity however most existing capacity is expected to be retired by the end of the decade.



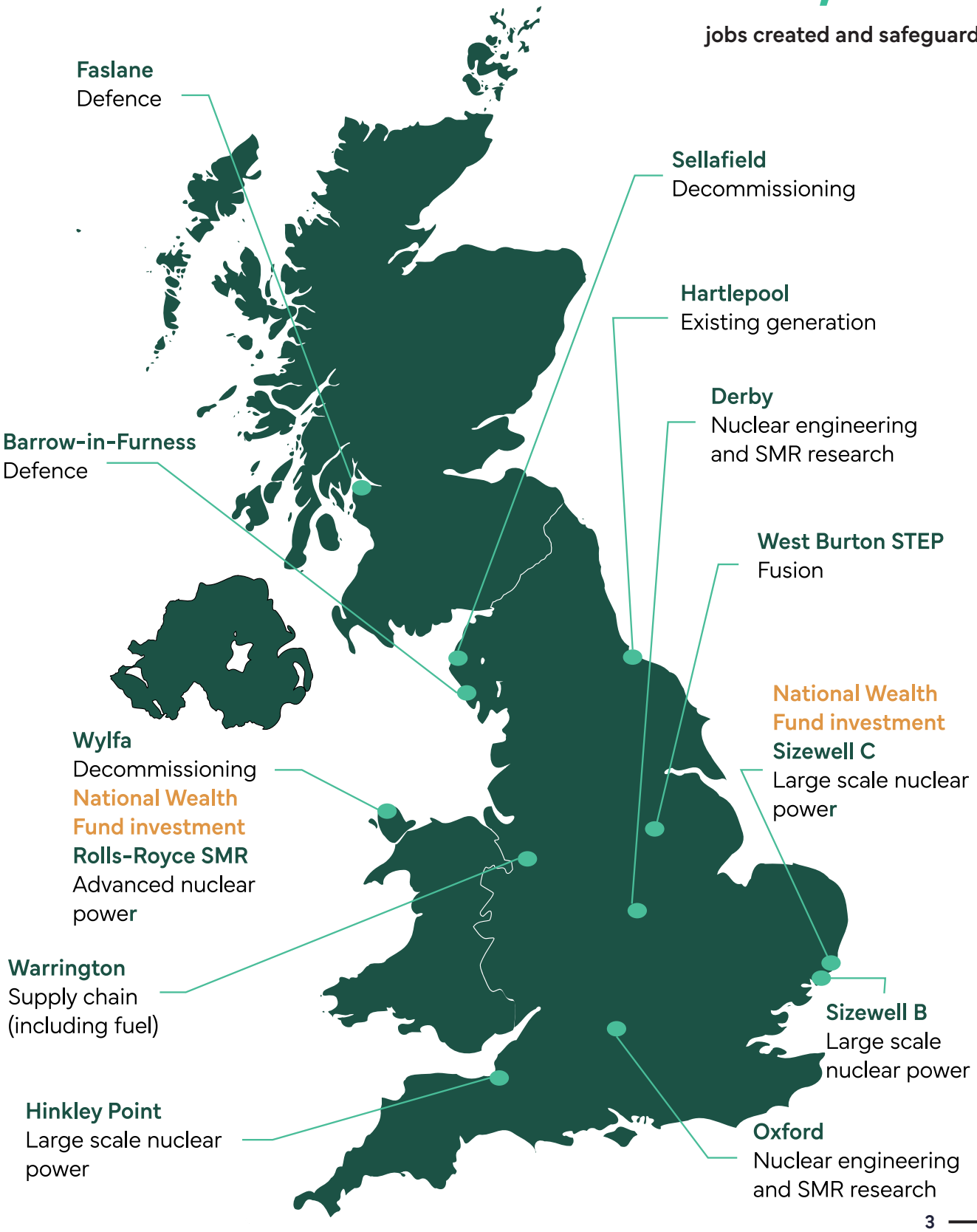
Nuclear in the UK and across the regions[2]

Nuclear has a deep history and broad regional impact across the UK – As of 2024, over 180,000 jobs just from civil nuclear, with c.30% of civil nuclear employment in most deprived 25% of local authorities (England). This provides just a snapshot of some of the major projects across the UK.

National Wealth Fund investment in Rolls-Royce SMR and Sizewell C will result in

11,820

jobs created and safeguarded[3].



Government policy

The UK Government sees nuclear as central to its clean power, energy security and growth ambitions, backing a new generation of large-scale, small and advanced reactors alongside reforms to regulation that help to accelerate delivery and strengthen UK nuclear capabilities.

This includes:

- The Government is taking forward all the recommendations in the Nuclear Regulatory Review, led by John Fingleton, as set out in the Government Response. This signals a commitment modernising the nuclear regulatory framework, helping create a more efficient and predictable regulatory environment for developing civil and defence nuclear.

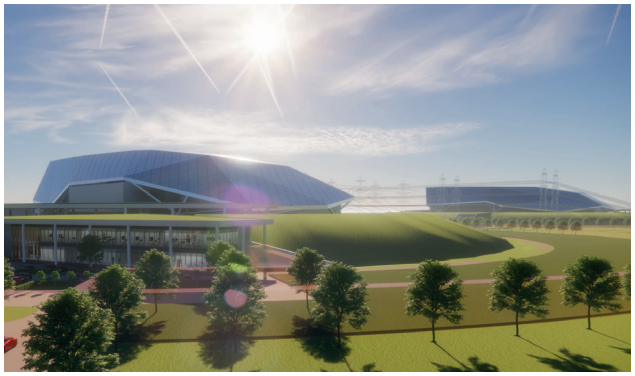
- The launch of the Advanced Nuclear Framework, sets out a pathway for privately led advanced nuclear projects to be brought forward in the UK, reflects growing confidence in the UK's advanced nuclear ambitions and the establishes a pipeline of future deployment opportunities.

- The Government's fusion programme, centred on STEP, a prototype fusion power plant at West Burton that aims to demonstrate commercially viable fusion power while building a UK fusion industrial ecosystem. Alongside this, the UK Fusion Strategy seeks to position the UK as a global leader in fusion by supporting R&D, supply chains, skills, private investment and the commercialisation of fusion technologies.

- The Government has set a clear strategic direction for civil nuclear fuel, including the development of domestic fuel-cycle capability. In particular, Government is investing in UK HALEU capability to support emerging advanced reactor technologies, strengthen energy security and reduce strategic dependencies.

Impact

The sector generates £20bn in GDP and the Nuclear Industry Association (NIA) estimates that every £1 of value added by the nuclear sector generates £1.60 across the wider economy. UK nuclear jobs exceeded 100,000 for the first time in 2026, and the industry has grown by 67% over the past five years, driven by construction at Hinkley Point C, Sizewell C and Europe's first SMR project in North Wales.[4]



Through existing investments, the National Wealth Fund is already supporting both large-scale nuclear baseload generation and first-of-a-kind advanced nuclear technologies in the UK. Through our Sizewell C and Rolls-Royce SMR investments, National Wealth Fund expects to support over 9,000 jobs. Nuclear also brings highly skilled, well-paid jobs to places, with median civil nuclear wages estimated at 1.3 times the UK median.[5]

The National Wealth Fund's role

The nuclear ecosystem spans technologies and activities at very different stages of maturity, from new large-scale generation and advanced nuclear to fuel-cycle capabilities, supply chains, life extension, decommissioning and emerging fusion technologies. These areas face different investment challenges, including the scale and duration of capital requirements, technology and delivery risk, and the need to build or maintain specialist UK capabilities. This creates different potential roles for government, public finance and private capital across the sector.

The National Wealth Fund will focus on areas where our investment can have the greatest impact in line with our mandate and strategic objectives. Going forward, we will work alongside government, the wider public finance ecosystem and the private sector to identify opportunities to support large-scale nuclear projects, advanced nuclear projects, supply chains and fusion spin-off technologies where these deliver wider sovereign and strategic benefits.

Advanced nuclear: SMRs and AMRs

Small, advanced and micro modular reactors could support more repeatable deployment and a wider range of energy and industrial applications. Some technologies may be first-of-a-kind, while others may be first deployments in the UK, creating distinct regulatory, supply-chain, delivery and financing requirements for each reactor type.

The Advanced Nuclear Framework (ANF) is the Government's primary route for enabling privately led advanced nuclear projects. It brings together policy, regulation, delivery and financing into a single framework, providing developers with a clearer pathway to engage with Government, demonstrate project readiness and access potential future support mechanisms.

This new Framework reflects a coordinated cross-government effort to address the barriers that have historically constrained nuclear deployment and accelerate project development. The ANF aims to provide greater certainty to the market while supporting the UK's ambition to become a leading destination for advanced nuclear investment.

The National Wealth Fund has a unique role within the Framework. Subject to projects demonstrating a credible path to commercial viability, the NWF will explore providing financing and support projects through the most challenging stage of project development. The Fund brings commercial financing expertise and the ability to support projects through challenging stages of development. Subject to meeting our investment criteria, the Fund will explore opportunities to provide development-stage finance. This could help bridge the financing gap before Final Investment Decision, demonstrate commercial confidence and mobilise additional private capital.

Supply chain and manufacturing

Nuclear projects require highly skilled engineering specialists, precision manufacturing, construction capability and components. 70% of the value content in the construction of Sizewell C[6] will go to UK companies, and GBE-N has an ambition to achieve 70% of UK content on Gwyndod, Europe's first small modular reactor project on Ynys Môn (Anglesey)[7]. To enable UK supply chain growth, suppliers need visibility of future demand to support investment decisions, alongside capabilities in skills and technology development.

Access to growth capital remains important for businesses looking to expand capacity and capability, and many suppliers are still building the track record needed to compete for larger nuclear opportunities. Greater visibility of future demand could support investment in UK capacity, skills and resilient supply chains. In some cases, opportunities may also be too small or fragmented to justify investment on a standalone basis, highlighting the importance of demand aggregation, strategic coordination and long-term project pipelines. Addressing these challenges will help strengthen the UK's nuclear industrial base and maximise the sector's long-term contribution to growth, energy security and regional economic development.

The National Wealth Fund will look to support domestic nuclear supply chain capability, that aligns with government priorities and where the businesses are commercially credible, but access to finance is constrained. This could include financing for manufacturing facilities, specialist equipment, capacity expansion, workforce capability and other critical enabling infrastructure. The Fund may also work alongside other public financial institutions to provide complementary or follow-on support, crowd in private capital and help UK businesses scale, innovate and compete for future nuclear contracts.

Large-scale nuclear

Large-scale nuclear projects require substantial development and construction finance over more than 10-year horizons. Projects require very significant capital investment and face long construction periods, meaning access to capital in construction and early operations is critical.

Building on our investment in Sizewell C, the Fund can consider financing that supports the construction and ongoing capital-expenditure requirements of strategically important projects. This could include debt, guarantees or credit enhancement where National Wealth Fund's participation is additional and helps achieve an investable allocation of risk. By investing alongside Government, project sponsors and private lenders, the Fund can help strengthen delivery confidence and mobilise the wider capital required.

Fusion

Fusion has the potential to provide abundant low-carbon energy. Although commercial fusion power remains a long-term prospect, and therefore outside of the Funds current strategy, nearer-term opportunities are expected to emerge from fusion-adjacent capabilities, including advanced magnets, materials, robotics and advanced manufacturing.

Fuel and fuel-cycle capability

Changing reactor designs and energy-security priorities create opportunities in fuel-cycle capability, precision manufacturing and specialist components. Existing reactors are linked to long-term fuel-supply contracts, so growth in this subsector is likely to focus on fuels supporting new reactors and emerging reactor technologies. Government has identified nuclear fuel as a strategic capability and is investing in domestic advanced-fuel production to strengthen energy security, reduce strategic dependencies and support deployment of the next generation of nuclear reactors.

As with the wider supply chain, National Wealth Fund can explore support for commercially credible opportunities aligned with government priorities for domestic nuclear fuel and fuel-cycle capability, where these meet the Fund's investment criteria and strategic ambitions.

Life extension

Where it is safe and economic to do so, extending the operational life of existing nuclear assets can help maintain low-carbon generation and energy security while replacement nuclear capacity is developed and brought online. The National Wealth Fund may consider opportunities to support nuclear life extension where investment is commercially viable and aligns with its investment principles and wider strategic ambitions.

Decommissioning

The UK is a global leader in civil nuclear decommissioning, underpinned by the long-term programme delivered by the Nuclear Decommissioning Authority. There are currently more than 12,000 employees at the Sellafield decommissioning site alone.[8]

The National Wealth Fund may consider opportunities where they align with its investment principles and strategic ambitions.

Key enablers for delivery

- Continued government commitment to nuclear, including delivery of the Nuclear Regulatory Review reforms and implementation of the Advanced Nuclear Framework, will be important in creating a more efficient, predictable environment for investment and deployment.
- Stronger understanding of the scale and timing of nuclear demand, across both grid requirements and private offtakers, alongside greater visibility of private-sector appetite, will help establish credible routes to market and support investment decisions.
- Maintaining a strong view of international technology and deployment trends will be important given the global nature of the sector. Progress in overseas nuclear markets can influence technology maturity, supply chains and future UK opportunities, making international developments an important part of understanding the UK investment pipeline.

Endnotes

1. World Nuclear Association: Nuclear Power in the United Kingdom

2. Nuclear Industry Association: NIA Jobs Map 2025

3. National Wealth Fund factsheets for Rolls-Royce SMR and Sizewell C

4. NIA: UK nuclear jobs hit 100,000 for first time as Britain invests in energy security

5. Oxford Economics: Economic Impact of the Civil Nuclear Industry report for the NIA

6. Sizewell C website: Supply chain

7. Rolls-Royce website: Rolls-Royce SMR Launches Supplier Programme Backed by £1.4 Billion of Contract Opportunities

8. World Nuclear Association: Nuclear Power in the United Kingdom



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