



UK Government

Small Modular Reactor Programme

Summary Programme Business Case



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Executive Summary

1. The programme business case (PBC) defined the Small Modular Reactor (SMR) programme's strategic intent, delivery approach, scope, rationale, expected benefits, risks, commercial strategy, resource needs, and governance framework. It also sought approval in principle for very initial programme enabling activities.

Strategic Case

2. Nuclear is critical to achieving net zero affordably, providing stable, low-carbon power that complements renewables and strengthens energy security. The government has commissioned the Strategic Spatial Energy Plan and continues to review how much nuclear capacity will be required by 2050 to meet net zero and energy security targets at least cost. The assumption at this stage, based on previous modelling and external estimates is that significantly greater nuclear capacity will be required than is currently in the operating and active nuclear project pipeline.
3. The government's strategy is to build a nuclear programme that incorporates a range of technologies. Alongside the SMR programme, the government is seeking to complete Hinkley Point C (HPC) and has reached a final investment decision (FID) on the Sizewell C (SZC) project. In addition, the government has published the Advanced Nuclear Framework to provide a route to market for private small and advanced modular reactor projects.
4. GBE N was established in 2023 to deliver, enable, and advise on the government's nuclear programme. Its purpose is to accelerate the deployment of clean, secure power to support UK energy security and economic growth.
5. The SMR programme, with its ambition to bring forward one of Europe's first SMR fleets, will play a crucial role in meeting these objectives.
6. A fleet-based approach to SMR deployment is key to unlocking the full value of SMRs by leveraging learning and modularisation to drive cost and schedule reductions, incentivise manufacturers to invest in UK supply chains, and build investor confidence. Furthermore, private investment can help increase the scale of future deployments while reducing reliance on public funding.
7. The programme will achieve its aim by delivering the first-of-a-kind (FOAK) project to demonstrate the commercial viability of SMRs; ensure the project is set-up to attract private investment to support delivery (subject to future policy decisions); build UK capability for future deployment; and strengthen UK supply chains where it supports delivery.
8. In November 2025, Wylfa on Anglesey in North Wales was selected to host the UK's first SMR project. The project will provide clean, secure energy and create significant economic opportunities for North Wales and the wider UK. Each SMR project will drive UK economic growth through:
 - a. **Increasing energy security:** Through providing greater nuclear capacity the project reduces consumer and business exposure to volatile international oil and gas markets.
 - b. **Building Supply Chain Capacity:** Alongside SZC and HPC, the programme will create a nuclear project pipeline that will increase investment in the UK supply chain.

- c. **Creating High Quality Jobs:** Initial estimates suggest the project could support up to 3,000 jobs on site during peak construction, and thousands more across the supply chain.
 - d. **Regional Growth:** The regions where the project and related factories are located will benefit from significant investment.
9. To lay the foundations for a fleet that could attract private investment, the initial project will prioritise activities that enable future projects and build investor confidence. This includes safely delivering the initial units at pace and maximising learning between units.
10. Constraints and dependencies of the programme include dependency on realistic timelines, stable policy, policy decisions on funding and financing approaches, and a capable supply chain and workforce. It also requires streamlined planning, strong governance, stakeholder engagement, and alignment with national energy strategy.
11. A successful programme would result in SMRs providing clean, secure power – delivered faster and cheaper per unit and able to attract private investment. The UK has the capability to realise fleet benefits, accelerating future delivery, attracting supply chain investment, and making a significant contribution to the Growth Mission.

Economic Case

12. Analysis indicates that delivering an SMR programme is likely to represent value for money, driving economic growth through increasing energy security and supporting UK supply chain growth.
13. The programme's end benefits are low carbon energy on the grid, energy system savings, energy independence, energy system resilience, attractiveness to private investment, job growth, and UK supply chain capability.
14. The SMR programme will undertake initial enabling site work beyond the scope of the initial project - this seeks to retain the option of the site's full potential being unlocked (subject to future decisions). Intermediate benefits will be monitored to guide benefits-led decisions.
15. The initial project will add up to 1.5GW of reliable, low-carbon power to the UK energy system, enhancing energy security and resilience while reducing reliance on imported energy. In line with the analysis done for SZC, power system modelling has been conducted to assess the value of the project over time. Initial modelling outputs suggest the project represents positive marginal value for money to the system with adjustments for uncertainty, risk and optimism bias applied. This modelling sits alongside the non-power system benefits, which include the potential to support ~3,000 jobs on site at peak construction, stimulating regional growth at the site and factory locations. Overall, the result is a robust value for money case for the SMR programme.
16. The programme's critical success factors include alignment with strategic objectives, delivering strong public value, affordability within likely funding, supplier attractiveness and capability, ease of delivery, and enabling faster, lower-cost deployment of future SMR fleets.
17. Programme risks stem from the early-stage maturity of the SMR initiative, with key uncertainties around site characteristics and FOAK technology.

Commercial Case

18. The commercial structure is as follows:

- a. **Delivery Scope:** Covers SMR plant construction, temporary works, and associated developments. GBE-N leads on site ancillaries and enabling works; the Technology Partner co-delivers SMR units, with GBE-N oversight.
- b. **Delivery Capability:** GBE-N will adopt a Development Company (DevCo) model to ensure operational independence, be able to attract private investment, and manage delivery. The DevCo will hold licences, secure financing, and operate the plant.
- c. **Procurement Pipeline:** There will be future procurements to enable the SMR programme.
- d. **Commercial Strategy:** Addresses contract interdependencies, market engagement, risk allocation, and contract management.

19. The key delivery elements are:

- a. **SMR Plant:** Includes Nuclear Island, Conventional Island, and Balance of Plant.
- b. **Associated Developments and Site Ancillaries:** Enabling infrastructure e.g. highways as well as the structures and facilities needed for construction but removed at project end.
- c. **Site Operations:** Encompasses site development, licensing, and safety case development.
- d. **Fuel Strategy:** GBE-N and the Technology Partner will co-develop a long-term fuel supply plan.
- e. **Nuclear Operator:** This will be a separate process.

20. The delivery model for the SMR programme will be to establish an operationally independent DevCo to lead delivery, hold licences, and attract private investment. Until this is established, GBE-N is building internal capability through an Integrated Project Team, combining in-house governance development with external expertise through a 'make' and 'buy' approach. This structure supports regulatory compliance, investor confidence, and a smooth transition to DevCo leadership.

21. The commercial strategy for the SMR programme addresses key risks like supply chain capacity and FOAK complexity, adopting a phased, collaborative contracting model with stage-gate off-ramps and tailored incentives.

Financial Case

22. GBE-N received over £2.5 billion in capital funding through the 2025 Spending Review, enabling public funding for one SMR project and associated site enabling activities.
23. This funding supports early design, mobilisation, and site operations, with detailed annual cost breakdowns showing phased investment across key activities.
24. Overall programme costs are currently high level and are expected to be refined in future business cases.
25. The programme enablers include site licensing (e.g. Development Consent Order preparation) for development of the site, potentially beyond what is required for the project. It also includes site preparation. Additional capital spend will be confirmed at future Spending Reviews.
26. No decisions have yet been taken on a funding model, though consideration is being given to the Regulated Asset Base (RAB).

Management Case

27. The SMR programme's governance and management approach remains consistent with the programme's scale and objectives. The programme's Senior Responsible Owner, initially within DESNZ, will transfer to GBE-N at the appropriate milestone.
28. GBE-N's Integrated Project Team is responsible for delivering the SMR project and will be stood up in a standalone DevCo. Governance includes monthly reporting to GBE-N and DESNZ, with escalation routes to senior boards and ministers.
29. The programme is structured into phased delivery:
 - a. **Phase 1** focuses on capability building and enabling workstreams
 - b. **Phase 2** initiates DevCo setup and assurance
 - c. **Phases 3 / 4** support design, FID preparation, and DevCo stewardship.
 - d. **Core activities** across all phases include continuous improvement, and programme definition.
30. The SMR programme is subject to usual Government assurance, in line with being part of the Government Major Projects Portfolio.
31. The SMR programme manages benefits, risks, and change through structured, government-aligned processes. Benefits are being developed per the National Infrastructure and Service Transformation Authority (NISTA) guidance, with a focus on fleet deployment to optimise long-term value.
32. The SMR programme has the appropriate risk and change management mechanisms in place, in accordance with government best practice.

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