

STOP STARTING AGAIN: NUCLEAR'S NEXT PRODUCTIVITY CHALLENGE

Fingleton has challenged the way the UK regulates nuclear. Now we need to apply the same challenge to the way we deliver it.

The UK now has a scale and breadth of nuclear ambition we have not seen for a generation. Sizewell C is progressing. The first SMR fleet at Wylfa is taking shape. Investment in the Defence Nuclear Enterprise is accelerating. Together, these developments give the UK something it has lacked for decades: a visible nuclear pipeline. The question is whether we use that pipeline to build a stronger delivery system, or simply deliver a series of separate projects.

The Government has also set a clear direction towards a more joined-up UK nuclear ecosystem – across civil, defence and decommissioning. If that alignment is turned into faster, more efficient delivery, the nuclear pipeline can do more than add capacity to the grid: it can anchor long-term industrial capability, skilled employment and supply chain confidence across the UK.



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Applying the Fingleton test to delivery

Fingleton identified more than regulatory barriers. It challenged a status quo mindset across the system. The test is simple: if something adds cost, complexity or delay without materially improving the outcome, why are we doing it?

That challenge should now extend beyond regulation and organisational culture to the delivery model itself. We should ask whether the way we design, procure, engineer and construct is making the next programme easier to deliver – or simply carrying forward complexity because it is familiar.

Every programme should start further ahead than the last

The UK has decades of nuclear experience. The task now is to leverage it more deliberately. That means combining the rigour and capability built at GW scale with the agility and repeatability SMRs demand; carrying lessons from an industrialised SMR fleet back into major programmes; and turning greater alignment across civil, defence and decommissioning into higher productivity across the UK nuclear ecosystem.

This is why innovation cannot simply mean new technology. It also has to mean finding better ways to deliver it. We need to go further than talking about learning and replication: we should measure them. Alongside safety, cost and schedule, major nuclear programmes should demonstrate the productivity gained from what has gone before.

That requires better use of data across programmes, so lessons on design, productivity, cost, risk and sequencing are visible, comparable and acted on. How much faster did we become? How much complexity did we remove? How much more efficiently did we deploy our people and capability? If every programme begins from broadly the same starting point, we are not capturing the full value of a national nuclear programme.



Sizewell C

On complex infrastructure programmes, the biggest productivity gains rarely come from a single intervention. They come from repeatable delivery models, early supply chain integration, stable teams and the disciplined transfer of learning from one phase to the next. That matters in nuclear because expertise is hard won: if teams are stood down between programmes, the UK loses knowledge, productivity and confidence that cannot simply be recreated at the next project launch. The productivity opportunity is not just within each project; it sits between projects.

In highly regulated, safety-critical environments, consistency is not the enemy of innovation. It is often what allows innovation to scale safely.

What this means in practice

If the UK is serious about nuclear as a long-term national programme, success cannot be judged project by project alone. It should also be judged by whether each programme reduces the cost, risk and complexity of the next.

That means:

- ▶ Building learning into programmes from day one;
- ▶ Measuring whether each project improves the next;
- ▶ Using data to track what is working;
- ▶ Keeping skilled teams and supply chains engaged between programmes; and
- ▶ Testing procurement decisions against one question: will this make the next programme easier to deliver?

Leaving the UK better able to deliver

A sustainable nuclear programme is one that leaves behind more than an asset: it strengthens the capability to deliver the next one. That means retaining specialist expertise, developing people, increasing productivity and giving stable businesses and supply chains the confidence to invest for the long term.

Government has set the direction, and Fingleton has challenged the system. The next step is to apply that same discipline to delivery, because productivity improves when learning is designed into the programme from the start, not captured retrospectively at the end.

The prize is not simply cheaper or faster nuclear delivery. It is a UK nuclear sector that becomes more capable with every programme it delivers – more productive, more resilient and better equipped to support energy security, economic growth and national security for decades to come.

About Balfour Beatty

Balfour Beatty is the largest UK-headquartered infrastructure company and one of the Government's 39 Strategic Suppliers. A proud British business founded more than a century ago, we employ more than 13,000 people across the UK and over 26,000 globally, mostly in the US and Asia. We work in every nation and region of the UK to finance, develop, build, maintain and operate the infrastructure on which the country's prosperity, resilience and future competitiveness depend, on schemes including the Lower Thames Crossing, HS2 and Net Zero Teesside Power.

Balfour Beatty has been part of the UK's nuclear industry for 70 years, from early civil works on first-generation power stations to major roles at Sellafield, Hinkley Point C and Sizewell C. Our experience spans new build, decommissioning, defence-related infrastructure and emerging technologies, across successive generations of complex, safety-critical infrastructure supporting both energy and national security.



Hinkley Point C