STEPHENSON HARWOOD

GIFEN:
FUEL CYCLE IN UK

July 2026

Energy Transition and Infrastructure

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Stephenson Harwood is an international law firm, and we are committed to creating 'positive partnerships' with our clients. We represent listed and private companies, institutions and individuals, building lasting relationships to help them succeed in a complex and ever-changing world.

Our focus is on five core sectors: *Energy Transition and Infrastructure, Life Sciences and Healthcare, Private Capital and Funds, Technology, and Transportation and Trade.*

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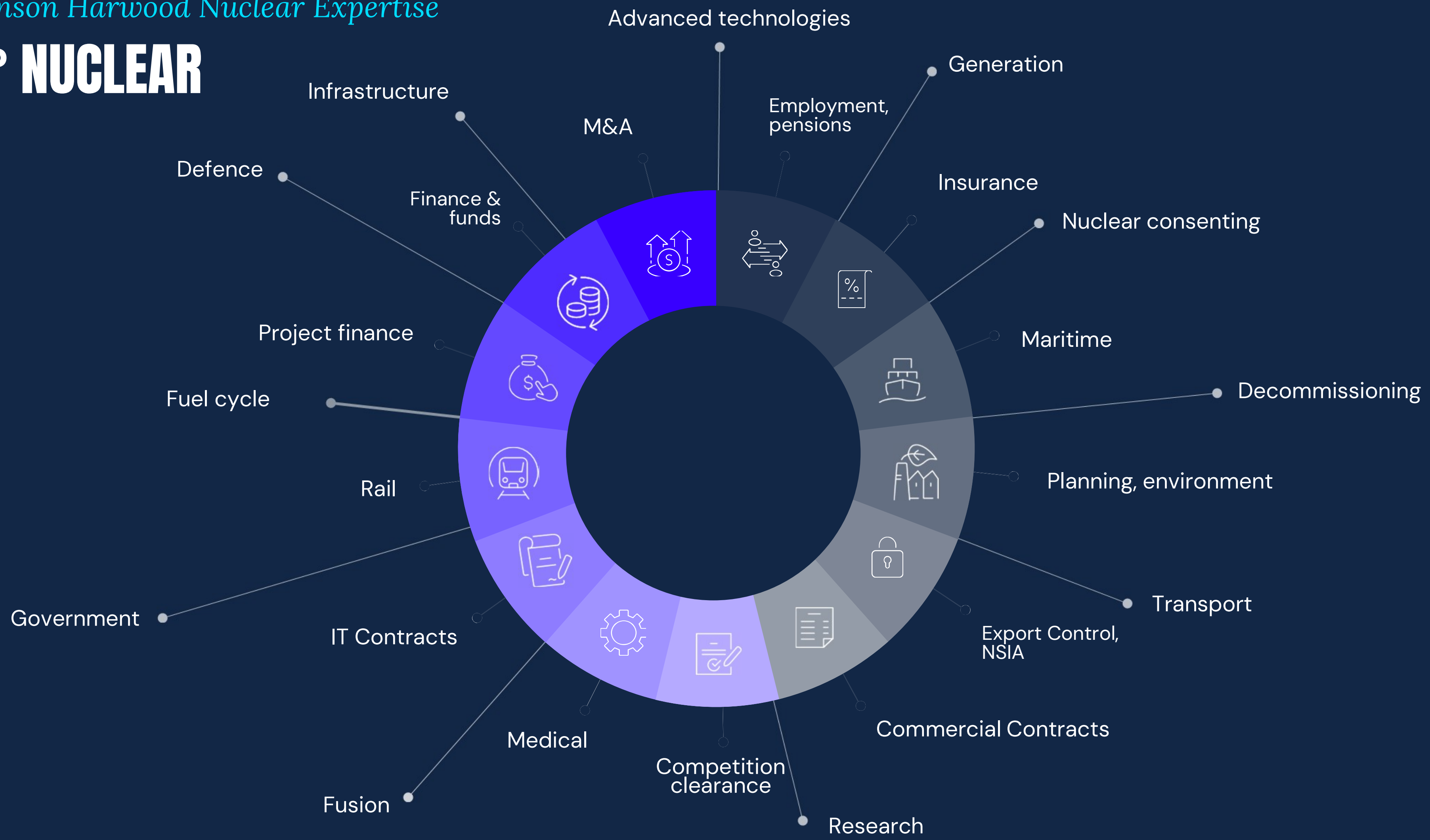
Stephenson Harwood Nuclear Expertise

360° NUCLEAR



Our team

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AGENDA

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OVERVIEW OF NUCLEAR INDUSTRY

- **The UK Civil Nuclear Market**
- **Economic Value: £6.4 billion** Gross Value Added (GVA) contributed annually to the UK economy.
- **Workforce Scale:** Sustains over **61,000 full-time equivalent** domestic jobs across the supply chain.
- **Current Generation: Generates ~14%–15% of UK electricity** from 5.9 GW capacity. **National Objective:** Government target of **24 GWe** by 2050 to provide 25% of baseline power.

- **Future Fuels Fund: post-Russian invasion**
- **Energy Sovereignty: Data Centers + Big Tech**
- **Energy Dominance: US Executive Orders**
- **Energy Independence: HPC/SZC; GBE-N; ANT**
- **Regulatory Reform: ONR; Int. Cooperation**

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OWNERS / OPERATORS

- **Generation & New Build Developers**
- **EDF Energy: Sole operator** of the current active reactor fleet and developer of HPC and SZC.
- **Great British Energy - Nuclear (GBE-N): State delivery body; SMRs; ANT Framework/Pipeline**
- **RR SMR -** driving small modular reactor (SMR) 3 x RR SMRs @ Wylfa - 470MW (1.4GW); 1m homes
- £2.5bn; £1.8bn cost; FID 2029: on grid mid-2030s

- **Fuel Cycle & Waste Management**
- **Urenco: Global leader** in centrifuge technology and international uranium enrichment.
- **Westinghouse: Technology provider** overseeing fuel manufacturing operations at Springfields.
- **Nuclear Decommissioning Authority: Government body** overseeing legacy clean-up via Nuclear Restoration Services

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FUEL CYCLE IN UK

- **Front-End & Processing Sites**
- **Uranium Enrichment: Capenhurst (Cheshire)** facility owned and operated by Urenco
- **Fuel Fabrication: Springfields (Lancashire)** site providing fuel manufacturing capabilities by Westinghouse.

BACK-END & LEGACY SITES

- **Spent Fuel Management: Sellafield (Cumbria)** handles waste processing, storage, and plutonium remediation.
- **Low-Level Waste Disposal: LLW Repository (Cumbria)** functions as the core national disposal vault.
- **Fast Reactor Decommissioning: Dounreay (Scotland)** manages legacy clean-up of breeder technology.

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ENRICHMENT IN UK

- **Uranium Enrichment & HALEU Supply**
- Urenco
  - **Action:** Expanding domestic uranium enrichment capacity at Capenhurst, Cheshire.
  - **Focus:** Building a new £196 million Advanced Fuels Facility co-funded by the UK Government to produce High-Assay Low-Enriched Uranium (HALEU) for SMRs and AMRs.
  - **Updates:** Approached by the UK government to produce specialised reactor fuel for the national defence programme.

urenco
The Energy to Succeed

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NEXT GENERATION FUELS

Urenco Projects

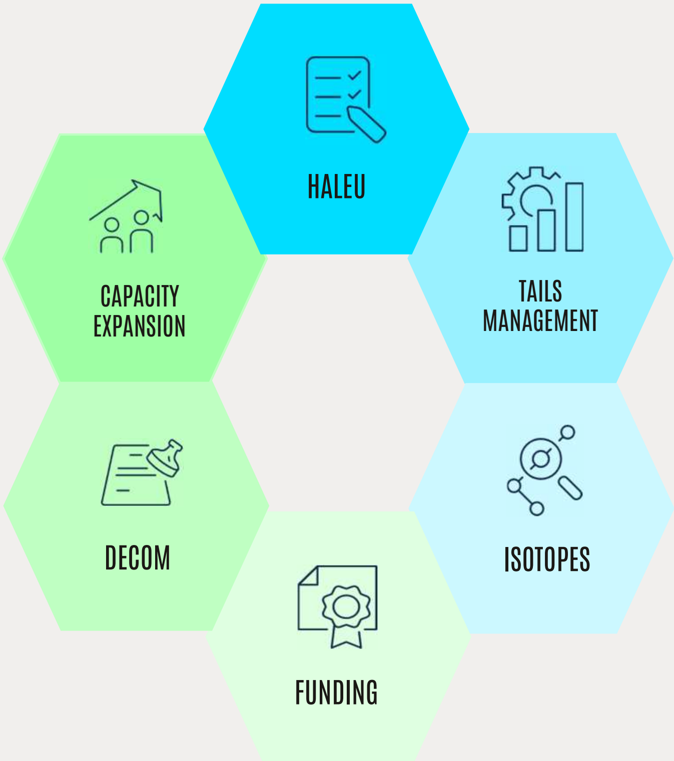
+ Capacity: Significantly expanded capex programme as of 2026; due to record order book of €21.3 billion; with growing demand for western-sourced nuclear fuel to replace Russian imports.

+ HALEU: Developing Europe's first commercial HALEU plant at Capenhurst; co-funded by £196 million UK government grant; with Project in design phase for an early 2030s startup.

+ TMF: Continued tails management and grid connection requirements at Capenhurst; supporting sustainable long-term operations.

+ Sites: Ongoing life-extension and modernisation of existing centrifuges and site infrastructure; across all locations.

+ Funding: Segregated Decommissioning funds; and fundraising across capital markets, supporting enrichment and isotopes expansion.



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FABRICATION IN UK

FUEL FABRICATION & ASSEMBLY

+ **Framatome**
  - **Action:** Initiating plans to establish a brand-new **nuclear fuel fabrication facility** inside the UK.
  - **Focus:** Expanding its local presence after securing major multi-year fuel contracts to service SZC.

+ **Westinghouse**
+ **Action:** Modernising operations at its Springfields fuel manufacturing site in Lancashire.
+ **Focus:** Expanding output for Light Water Reactor fuel, Advanced Gas-cooled Reactor fuel, and intermediate uranium components.

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FUTURE FUEL TRENDS (2026-2035)

+ **SMR & AMR Developers (Co-developing Fuel Pipelines): Centrica & X-energy**
  - **Action:** Partnering to deploy 12 high-temperature gas-cooled reactors in Hartlepool.
  - **Focus:** Creating a UK-centric fuel supply stream to deliver high-temperature industrial heat and power by the mid-2030s.

+ **EDF & HOLTEC UK**
  + **Action:** Forming a joint venture to build a 1.3GW SMR fleet at Cottam, Nottinghamshire.
  + **Focus:** Establishing localised manufacturing capabilities to support their SMR-300 fuel cycles.
+ **UK Infinity Fusion Consortium (Tokamak Energy) Type One Energy, and AECOM)**
  - **Action:** Spearheading the first private-sector-led fusion plant in the UK. **Focus:** Over 54% of fusion companies in the UK network are now expanding into fusion fuel cycle systems to handle tritium breeding and fusion fuels.

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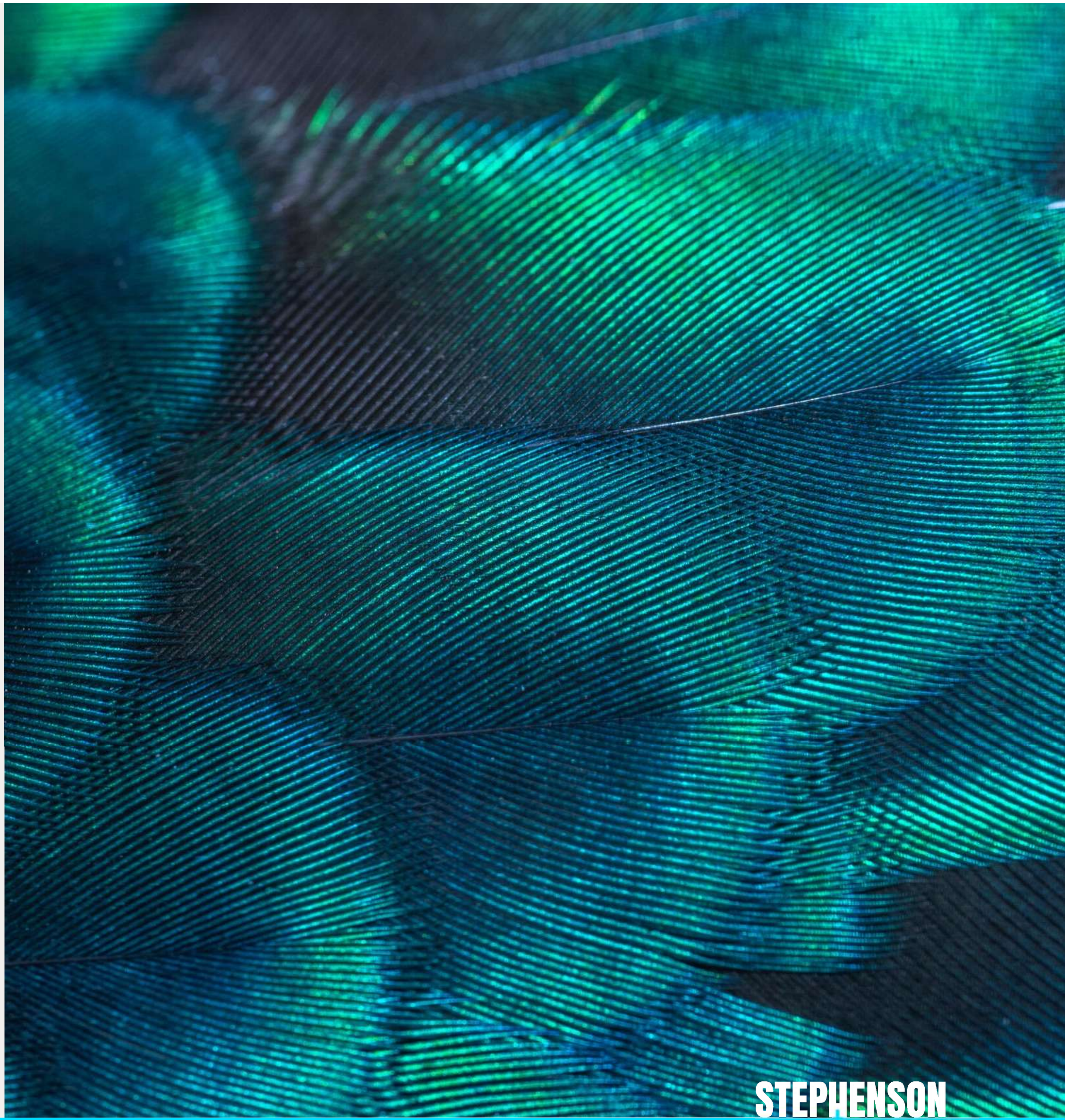
OPPORTUNITIES

- **Westinghouse** – Deconversion; Conversion re-start?
- **TerraPower** – UK project: GDA, Site + Fuel: QLE/Urenco
- **Urenco** – HALEU fuel facility (1st in Europe)
- **Rolls Royce** – AMR fuel for maritime nuclear
- **Framatome** – Fabrication plant planned in UK
- **X-Energy** – AMRs x 12 @ EDF's Hartlepool (ANT Pipeline)
- **HOLTEC UK** – AMR x 4 @ EDF's Cottam; 1.3GW; Tritax
- **SGE** – BWRX300 x 6 @ Oldbury (ANT Pipeline), 4.2GW
- **Dev. Cos –** GBE-N; CNP; Fylde Energy; & Fermi

Broader Sector Growth

- **Quantum Leap Energy** – hopes to commercialize proprietary laser tech to secure, vertically integrated modular supply chain across the nuclear fuel cycle
- **LEU & LEU+** aiming to capture market share
- **HALEU –** modular supply for SMRs/AMRs from 2028?



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Q+A