

Nuclear Industry Association Response to the Energy Security and Net Zero Committee's 'Business and Energy' Inquiry

The Nuclear Industry Association welcomes the opportunity to respond to the Energy Security and Net Zero Committee's 'Business and Energy' inquiry.

The NIA is the trade association and representative body for the civil nuclear industry in the UK. We represent more than 340 companies operating across all aspects of the nuclear fuel cycle, including the current and prospective operators of nuclear power stations, international designers, and vendors of nuclear power stations, and those engaged in decommissioning, waste management and nuclear liabilities management. Members also include nuclear equipment suppliers, engineering and construction firms, nuclear research organisations, and legal, financial and consultancy companies.

Executive summary

Industrial decarbonisation is a vital part of realising the UK's commitment to reach Net Zero by 2050. To decarbonise industry with energy security and strong economic growth, the offers of nuclear must be fully leveraged.

Expansion of nuclear power offers industry clean electricity while lowering system costs which are ultimately covered by consumers. According to the United Nations Economic Commission for Europe (UNECE), nuclear has the lowest land use, lowest ecosystem impact and the lowest lifecycle carbon of all generating technologies at 5.1-6,4g CO₂/kWh.¹ Reliable baseload power from nuclear reduces balancing costs, which in total cost domestic and industrial consumers in Great Britain £2.98 billion in 2025.² Nuclear also provides inertia to help stabilise the grid, and requires less transmission infrastructure investment than renewables. By applying learnings from France, where industrial electricity prices are among the lowest in the IEA with 70% nuclear in the electricity mix, the UK can bring down high electricity bills which are holding back industrial electrification.^{3 4}

Furthermore, as highlighted in the 2021 Industrial Decarbonisation Strategy, large-scale nuclear has globally been used for industrial processes such as chemical processing, paper production, desalination, steam supplies, as well as district heating.⁵ Advanced Nuclear Technologies offer further applications beyond the grid, such as industrial process heat, low carbon hydrogen production, and synthetic fuel production. Utilising these offers of nuclear fully will help decarbonise industry beyond electrification.

¹ United Nations Economic Commission for Europe (2022) *Carbon Neutrality in the UNECE Region: Integrated Life-cycle Assessment of Electricity Sources*. Available at https://unece.org/sites/default/files/2022-04/LCA_3_FINAL%20March%202022.pdf

² NESO (2026) Balancing costs. Available at: <https://www.neso.energy/industry-information/balancing-costs>

³ DESNZ (2026) International non-domestic energy prices. Available at: <https://www.gov.uk/government/statistical-data-sets/international-non-domestic-energy-prices>

⁴ WNA (2026) Nuclear Power in France. Available at: <https://world-nuclear.org/information-library/country-profiles/countries-a-f/france>

⁵ DESNZ (2021) Industrial Decarbonisation Strategy. Available at: https://assets.publishing.service.gov.uk/media/6051cd04e90e07527f645f1e/Industrial_Decarbonisation_Strategy_March_2021.pdf

Alongside supporting growth in other industries, new nuclear itself also brings significant economic benefits. In 2024, the civil nuclear workforce directly added about £8.0 billion to UK GDP, and the civil nuclear industry directly contributed £5.8 billion in revenues to the Exchequer.⁶ New projects have driven the nuclear workforce to 102,606 people as of 2026, providing high-skilled and well-paying jobs that help address regional inequalities.⁷⁸

The 2021 Industrial Decarbonisation Strategy highlighted funding from the Net Zero Innovation Portfolio and the Advanced Nuclear Fund as avenues of Government support for nuclear deployment in pursuit of industrial decarbonisation. Since then, the Advanced Nuclear Framework has been published, and we encourage Government to continue to support SMR and AMR deployment through funding opportunities for projects on the Advanced Nuclear Pipeline. Alongside advanced nuclear technologies, we also encourage Government to emphasise further large-scale deployment as a key enabler of industrial decarbonisation in any future Industrial Decarbonisation Strategy.

Further Information

The NIA is happy to provide more context, or any clarifications desired on the content of our response and to ask our members where appropriate for additional information that may be useful.

Please contact Elisabeth Roden, Policy Analyst for the Nuclear Industry Association, at elisabeth.rodén@niauk.org to do this.

⁶ Oxford Economics (2025) The Economic Impact of the Civil Nuclear Industry. Available at: <https://www.niauk.org/wp-content/uploads/2025/06/2025-Economic-Impact-of-the-Civil-Nuclear-Industry.pdf>

⁷ Nuclear Industry Association (2026) NIA Jobs Map 2026. Available at: <https://www.niauk.org/nia-jobs-map-2026/>

⁸ Oxford Economics (2025) The Economic Impact of the Civil Nuclear Industry. Available at: <https://www.niauk.org/wp-content/uploads/2025/06/2025-Economic-Impact-of-the-Civil-Nuclear-Industry.pdf>