ENERGY & UTILITY SKILLS PARTNERSHIP

Skills Strategy 2025-2030

Skills to deliver the UK's future

APPENDIX | **Other Factors Shaping Our Industries**

Other Factors Shaping Our Industries

Government and Policy

The Decarbonisation Imperative

Wider net-zero ambitions demand a fundamental shift across the energy and utilities sector, creating significant skills needs. The Spending Review saw £3 billion go to the Department of Business & Trade for advanced manufacturing in the net-zero transition, such as battery storage, zero-emission vehicles and aircraft. The UK's legally binding net-zero target of 2050, reinforced by interim targets such as the 81% emissions reduction by 2035, requires a workforce capable of implementing and managing low-carbon technologies at scale. High public awareness and concern about climate change further underscores this urgency, as highlighted by the Department for Energy Security & Net Zero's Public Attitudes Tracker.[1]

Net-Zero Scepticism

The speed and spending levels of the green transition are being questioned by a range of groups. Internationally, the President of the United States Donald Trump is a long-term climate change denier and is affecting the behaviour of global firms, while in the UK the Conservative Party is sceptical and Reform UK are actively hostile. The likes of the Tony Blair Institute for Global Change, which is close to the Labour Party, has warned that limiting energy consumption and fossil fuel production is 'doomed to fail', and highlighted that, 'In developed countries, voters feel they're being asked to make financial sacrifices and changes in lifestyle when they know that their impact on global emissions is minimal'.[2]

Housing and Construction

The UK Government has set ambitious housing targets of 370,000 new homes a year and 1.5 million over five years. This will create greater demand for utility workers to build gas, water and electricity supplies.

Wider construction and infrastructure projects funded and catalysed by the UK Government will create similar demands and, as a result, competition for talent. The UK Government's new construction skills colleges, which aim to train more than 40,000 construction workers by 2029, will increase competition for recruits, especially for the water sector.

The Planning and Infrastructure Bill[3], aimed at expediting green energy projects, will create a need for professionals skilled in navigating revised planning processes.

1. Department For Energy Security & Net Zero, 'DESNZ Public Attitudes Tracker', Link
2. Tony Blair Institute for Global Change, 'The Climate Paradox: Why We Need to Reset Action on Climate Change', Link
3. Ministry of Housing, Communities & Local Government, 'Guide to the Planning and Infrastructure Bill', Link

Schools Reform

Soon after gaining power, the UK Government launched a review of the school curriculum in England and Wales, and it is due to report back soon. Responses to a call for evidence[4] said there needed to be a stronger focus on future skills, including digital literacy, sustainability and climate science. The UK Government has committed to give schools a year's notice for any major reforms while the review's chair said bigger changes could require further review or consultations and may not happen during this parliament. A schools white paper is also due from the Department for Education, including covering attainment, exam demand and funding for special educational needs and disabilities, which is thought to be delaying its launch.

Growth Duty

The statutory duties of Ofwat and Ofgem have been expanded to include the Growth Duty, a secondary obligation requiring regulators to consider the importance of promoting economic growth in their decision-making. This aligns with the UK Government's stated priority of making economic growth its top national mission, with all regulators expected to contribute.

The Growth and Skills Offer

From April 2026, Skills England will introduce a new element of flexibility into the Apprenticeship Levy: the Growth and Skills Offer will allow paying organisations in England to spend a proportion of their funds on training and qualifications that are included in the offer.

We understand that standalone modules, based on clusters of existing Knowledge, Skills, and Behaviours (KSBs) are being considered, which could open an opportunity for developing new modules that meet specific industry needs and respond to calls from many sector employers for a more agile and responsive skills funding system.

Skills England's objectives include working with its equivalents in the devolved nations to ensure consistency and coherence across the UK.

Energy Industry Price Control Periods and Workforce Implications

Across the various RIIO price control periods used by Ofgem (Revenue = Incentives + Innovation + Outputs) covering electricity transmission (RIIO-T2 and T3), electricity distribution (RIIO-ED2 and ED3), and gas transmission and distribution (RIIO-GD2 and GD3), there are consistent themes around workforce development, but also notable shifts in emphasis.

The upcoming RIIO-T3, RIIO-ED3, and RIIO-GD3 periods will mark a transition toward more ambitious workforce strategies, larger-scale workforce expansion and strategic alignment with the net-zero energy transition. These place greater emphasis on expanding and upskilling the workforce to meet accelerated investment and technological demands. There is a stronger focus on developing green jobs, multi-skilling, and building resilient talent pipelines capable of supporting digitalisation, smart network optimisation, and increased system complexity. Diversity and adaptability are also becoming central to workforce planning.

4. Curriculum and Assessment Review: Interim Report, Link

Industry

Energy Recovery in the Water Industry

Energy recovery technologies, particularly anaerobic digestion (AD), are central to embedding circular economy principles in the water industry. AD enables the conversion of sewage sludge into biogas, biomethane, and biosolids, which can be used to generate renewable energy, fertilise soils, and reduce reliance on carbon-intensive processes. These outputs not only offset wastewater treatment costs but also create new revenue streams through the sale of biomethane to gas networks and biosolids to agriculture.

The industry is expected to scale up the upgrading of biogas into biomethane for injection into local and regional gas networks or use as vehicle fuel. This process requires the removal of impurities to meet strict gas quality specifications, which requires specialised knowledge and skills.

These advances are driving demand for a highly skilled and adaptable workforce. Critical roles include biogas technicians, biochemical engineers, quality control managers, and bioresource planners, many of which require degree-level qualifications.

Transferable skills from sectors such as gas production, biotechnology, and environmental engineering will be vital, as will flexibility and cross-sector workforce mobility.

EV Charging Rollout

As of August 2025, the UK had over 85,000 public electric vehicle (EV) charging points installed across more than 42,000 locations.[5] This puts the country on track to meet its target of 300,000 public charge points by 2030, which the Department for Transport considers the minimum required to support the transition to zero-emission vehicles.[6]

The UK Government has confirmed that sales of new petrol and diesel cars will end in 2030, with all new cars and vans required to be 100% zero-emission by 2035.[7] This transition is expected to significantly increase electricity demand and requires a robust, accessible charging infrastructure.

Meeting this demand will require a substantial increase in skilled workers across the sector. Expertise in electrical engineering, site surveying, grid connections, and charge point installation and maintenance will be critical.

Oil and Gas Reprioritisation

Some major players are rethinking their climate commitments. Examples include BP increasing oil and gas investment while decreasing renewable funding, and Shell pausing new offshore wind developments to focus on maximising the value of its existing platforms.

The UK Government must also soon decide whether to allow the extraction of fossil fuels from the Rosebank oil and gas field in Scotland. Retention of roles in the oil and gas sector could impact the anticipated transition of these skilled workers into offshore renewables. Robert Gordon University has published research on this difficult process and the urgency for action and cross-sector collaboration to protect jobs.[8]

5. Zapmap, 'EV charging statistics 2025' Link
6. UK Parliament, 'Public charge points for electric vehicles' Link
7. UK Government, 'Phasing out the sale of new petrol and diesel cars from 2030 and support for zero emission vehicle (ZEV) transition' Link
8. Robert Gordon University, 'RGU report issues UK offshore energy industry jobs warning' Link

Climate Adaptation and Resilience

Climate change is increasing the frequency and severity of extreme weather events, such as heatwaves and storms, which pose serious risks to water availability and quality. Droughts reduce water supply, while intense rainfall and flooding can overwhelm infrastructure and degrade water quality.

Between 2015 and 2019, electricity consumption in the UK water industry rose, largely due to increased energy demands for pumping and treatment. This was driven by higher environmental standards and the need to respond to more frequent and intense weather events.

Scottish Water's Climate Change Adaptation Plan[9] highlights that drought-related water supply deficits could quadruple by 2050, and dry conditions may lead to more frequent water main bursts due to ground movement. Climate change is also expected to affect water quality, with around 200 sources at risk of increased manganese levels and algal blooms by mid-century.

Sewer systems are similarly vulnerable, with projections suggesting that the number of properties at risk of sewer flooding could nearly double by 2050, alongside a 20% increase in overflow discharges. Adaptation measures include better monitoring, customer engagement, and infrastructure improvements to manage surface water and reduce pressure on sewers.

Nature-based solutions such as Sustainable Drainage Systems (SuDS) and peatland restoration offer sustainable ways to manage water and mitigate climate impacts. These approaches help absorb excess water, improve water quality and enhance ecosystem resilience, making them vital tools for climate adaptation in the water industry.

Energy production is also at risk of the extreme weather that is more frequent due to climate change. Severe hailstorms can damage solar panels, as do strong winds, which also impact wind turbines. Wildfires destroy grid infrastructure, while extreme heat poses a threat to battery storage that can overheat and even start fires. However, a diversified production mix can enhance the resilience of the grid by reducing the risk of a single major source being disrupted.[10]

9. Scottish Water, 'Scottish Water Climate Change Adaptation Plan 2024' Link
10. Zurich Insurance, 'Future-proofing renewables in the face of extreme weather' Link

ENERGY &
UTILITY SKILLS
PARTNERSHIP

Energy & Utility Skills Limited
Avon Business Centre, 435 Stratford Road, Shirley, Solihull B90 4AA
0121 713 8255 | enquiries@euskills.co.uk