

Energy UK Explains Building the Clean Energy Workforce

October 2025

Key points

- The transformation of our energy system to secure our future needs will require the expansion of our skilled energy workforce.
- The Government estimates we will need 400,000 additional jobs by 2030, double the amount the clean energy sector currently employs.
- The Clean Energy Jobs Plan outlines a range of policy initiatives to tackle the skills challenge and map out the workforce needs of the sector, enabling long-term industry investment into hiring, training and reskilling.
- The Government will work with industry and trade unions to ensure these are rewarding, high-quality jobs, strengthening workforce protections and knocking down accessibility barriers in the sector.
- A successful workforce transformation requires a collaborative and strategic approach that mobilises both private and public funding strategically.
- A clean energy jobs boom requires policy certainty, allowing businesses to invest in skills with confidence and the projected pipeline of jobs to materialise across the country.

What is the skills challenge?

The move towards a low-carbon economy requires turbocharging delivery across the energy sector; from the construction and maintenance of new infrastructure projects to the nationwide installation of low-carbon heating and smart energy systems.

This energy transition is currently underway. Earlier this year, the Modern Industrial Strategy outlined a commitment to doubling investment levels in the frontier clean energy industries to over £30 billion per year by 2035.

As a result, workforce demand is expected to grow dramatically over the next decade, outstripping the number of skilled workers that are currently in the industry.

Clean energy jobs are defined as those supported by the manufacture, deployment, and operation of clean energy technologies and their supply chains, ranging from generation and distribution to carbon management, clean heat, and energy efficiency installation roles.

In some cases, the challenge lies in retraining and upskilling the existing workforce to equip them with the technical knowledge needed to operate new technologies and transition away from carbon-intensive processes.

In other areas, the industry is facing acute skills shortages and must urgently expand recruitment efforts to attract new talent into the energy workforce. These labour shortages occur when there are not enough people available to fill the vacancies.

The convergence of both these trends has created a skills gap, acting as a significant barrier to successful decarbonisation.

What does the energy transition mean for jobs in the energy sector?

The Government has recently published updated workforce expectations in the clean energy sector based on the existing project pipeline. It estimates a total requirement of 860,000 people, a doubling of the existing workforce which requires around 400,000 new jobs by 2030, broken down by region.¹

These figures provide an initial, top-level indication of the projected talent required in line with the Government's Clean Power Mission, providing industry with greater confidence helping it to plan and invest.

The scale of this transformation is nothing short of extraordinary. According to existing research, up to one in five jobs in the economy will experience a shift in demand due to changes in the skills required. And while estimates vary, around three million will need to retrain or learn additional skills.²

But there is also no time to wait. Research shows 80% of the projected 2030 workforce may already be in work.³ But training takes time and can vary in length, in the case of apprenticeships ranging across several years depending on qualification level. An electrician apprenticeship for example typically takes around four years.⁴ Therefore, strategic, regional investment into reskilling and training needs to be an urgent priority to meet these ambitious targets and deliver a just transition that leaves no one behind.

These jobs will be spread across low-carbon activities and the Government has identified 31 priority occupations. These include strong growth in construction roles linked to new renewable energy generation, nuclear, CCUS, and hydrogen.

However, the majority of new jobs will be located in the supply chain that services these activities. By 2030 there are also expected to be large increases in the energy efficiency and low-carbon heating sectors.

The energy sector offers a huge range of roles from entry-level electricians, welders, and construction trades to more experienced engineers, planners, and project managers.

Beyond job creation, growing domestic capacity and capability will improve the resilience of our energy sector. Against a global backdrop of growing shortages in

¹ DESNZ (2025) [Clean Energy Jobs Plan](#)

² LSE Grantham Institute (2019) [Investing in a just transition in the UK](#)

³ Industrial Strategy Council (2019) [UK Skills Mismatch in 2030](#)

⁴ Electrical Careers (2025), [Electrical Training Routes](#)

key skills, a successful workforce transition will leave the UK economy less exposed to a reliance on short-term contractors, helping to reduce costs.

It will also help boost competitiveness and attract global investment into projects and supply chains located at the UK's doorstep, as investors seek reassurance in the availability of a local workforce with the right skills and expertise.

What steps is the Government taking?

The Government has recently (October 2025) published the Clean Energy Jobs Plan, the first in an intended series of sector-specific workforce strategies for the eight sectors that were singled out as the key growth sectors in the Modern Industrial Strategy.

It was developed by the Office for Clean Energy Jobs, a team within the Department for Energy Security and Net Zero working across Government to help build the skilled workforce needed to deliver the energy transition.

The plan outlines a range of policy initiatives to tackle the skills gap and how ministerial departments, devolved governments, Skills England, trade unions, regional bodies and training providers will collaborate to undertake effective workforce planning and implement policies.

How will the Clean Energy Jobs Plan support the next generation of the clean energy workforce?

To help deliver the expected growth in jobs and skills, Government is directing public resources into tackling the funding gap. These include a three-year £100 million investment package to support engineering skills in England and a £625 million construction skills package.

This funding will enable the development of five new Clean Energy Technical Excellence Colleges focused on providing training and qualifications directly aligned with frontier industries in the clean energy sector. This draws on the £200 million total capital funding of the Skills Mission Fund.

The Plan also reveals additional funding for the recruitment and retainment of skilled teachers in Further Education, outlining how the Targeted Retention Incentive (TRI) will provide eligible FE teachers in priority subjects with annual £6,000 grants in addition to their salary.

On top of that, Government has committed £1.7 billion in capital funding over the next four years to help with the maintenance of colleges' estates, as well as £1.2 billion per year to support skills development over the course of the parliament.

Lastly, the Growth and Skills Offer has been reformed to provide greater flexibility to people taking on apprenticeships, both by shortening the duration of courses and introducing new ones tailored to the demands of clean energy industries.

What role will the existing UK workforce play?

The Clean Energy Jobs Plan also includes an overview of how Government will partner with industry to harness the transferability of the UK's skilled workforce, both in and outside the energy sector, and provide upskilling opportunities.

This includes an expansion of the Oil and Gas Transition Training Fund in Aberdeen to aid North Sea workers, supported by £18 million in funding over the next three years, as well as £2.5 million in additional funding to support pilot regional skills interventions in Aberdeenshire, Cheshire, Lincolnshire, and Pembrokeshire.

A special role will be played by the Department for Work and Pensions, which is reforming the Jobs and Careers Service to support entry into the workforce and reskilling by integrating employment, skills, and careers support.

Similarly, with help from RenewableUK, Offshore Energies UK and the Scottish Government, there will be reforms to the Energy Skills Passport to expand the energy sectors in its scope and help facilitate friction-free career mobility across industries.

Support for campaigns targeted towards socially disadvantaged groups such as veterans and prison leavers will also bring down access barriers and help attract a broader range of talent into the sector.

What kinds of jobs will these be?

There is a clear commitment to ensuring industry delivers high-quality, rewarding jobs with strengthened workforce protections. This includes amending employment rights legislation where necessary to remove discrepancies in the sector and fostering negotiations between trade unions and employers.

For now, the focus leans towards renewable technologies, with DESNZ grants and the Clean Industry Bonus being the chosen policy mechanisms to incentivise commitments to a Fair Work Charter and open conversations with trade union representatives.

A series of social inclusion initiatives will also endeavour to widen the diversity of the talent pool by reporting on inclusivity metrics and refining recruitment practices to help attract a larger proportion of women and people from ethnic minority backgrounds into the energy sector.

To inspire the next generation of energy professionals, the Plan also maps out sector-specific commitments to increase awareness of careers in clean energy industries through enhanced curriculums, careers fairs, and skills programmes tailored to specific sectors such as nuclear, hydrogen and CCUS, and heat and building decarbonisation.

What comes next?

The Office for Clean Energy Jobs will continue to map out workforce demands in greater detail through the launch of Local Net Zero Hubs, which will deploy £250,000 in funding to work with local authorities, Mayoral Strategic Authorities, and Skills

England on producing more granular job data analysis and contributing to Local Growth Plans and Local Skills Improvement Plans.

Moving onwards, delivery of the Plan will be overseen by the Clean Energy Jobs Steering Group, which will coordinate cross-sector stakeholder engagement and monitor progress.

Will this be enough?

Overall, the Clean Energy Jobs Plan includes several skills policy initiatives that move in the right direction, and its workforce demand projections will help build confidence in businesses to invest in staff recruitment and training. But while the funding announced is to be welcomed, it is unlikely to be enough on its own.

In order for a clean energy jobs boom to materialise, faster progress needs to be made across areas of the energy sector so that the new jobs created outpace job losses in traditional technologies. Maximising private sector investment in skills requires greater policy certainty and continued build-out of all low carbon technologies.

UK businesses need clear project pipelines, driven by a viable route to market for all technologies, alongside visibility of product demand, to make the appropriate workforce plans for the future and drive employment in their sectors.

The Government should look towards combining public spending with greater levels of private investment into skills. For this to work, we need more strategic, industry-wide funding mechanisms that do not place the onus exclusively on individual renewable power projects.

Lastly, the skills funding landscape remains heavily fragmented, and a more streamlined and simplified set of structures could also help improve the impact of skills investment and streamline the process for developers and investors, enabling them to build out projects more quickly creating more jobs.

About Energy UK

Energy UK is the trade association for the energy industry, representing companies investing billions of pounds to secure our country's current and future energy needs. From growing start-ups to major electricity generators, grid and infrastructure developers and energy suppliers, our members are driving change across power, heat, transport and flexibility.

We champion initiatives such as TIDE, the industry's drive for greater inclusion and diversity. Through our Young Energy Professionals Forum, with more than 3,000 members representing 350 organisations, we support the development of future leaders.

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