

Closing the Green Skills Gap

Ensuring a Green Workforce Transition by 2030

Summary

- The UK Government has committed to cutting greenhouse gas emissions by 81% by 2035. Delivering on this target requires an estimated 121,000 additional clean energy workers and 186,000 additional construction workers by 2030.
- However, the current green skills provision is inadequate. The estimated minimum investment needed to train workers to close the green skills gap is an additional £1.7 billion over 5 years. This excludes capital costs and broader cross-sectoral needs.
- Further Education institutions—key to delivering green technical qualifications—face major structural barriers, including underfunding, staffing shortages, and a fragmented skills system. Without urgent intervention, the UK risks missing climate targets due to an insufficiently skilled workforce.
- There is now a narrow window for Parliament to implement funding reforms that match green workforce planning with climate ambitions and industrial strategy.

Policy Recommendations

1. **Establish a National Delivery Plan for green skills:** The Government should create a coordinated, cross-departmental green skills delivery plan that maps workforce demand and cost forecasts to public post-16 further and adult education provision. This plan must focus not only on scaling provision but also on ensuring its long-term sustainability and responsiveness to evolving net-zero workforce needs.
2. **Increase baseline pay for technical educators in Further Education:** Pay disparities between FE educators and industry professionals in technical fields are a significant barrier to recruitment and retention. Whilst providers set pay, the Government should increase core revenue funding to enable Colleges to offer competitive salaries, particularly in high-demand net-zero sectors such as engineering, construction and energy systems.
3. **Ringfence green skills funding within existing budgets:** Within existing capital and programme budgets, Government should set aside dedicated funding for green skills provision. This funding should be targeted toward Further Education Colleges and directed at priority sectors identified in net-zero workforce plans, ensuring consistency and visibility for providers planning new courses.
4. **Create a national network of Low Carbon Centres for Excellence:** To build sector-wide capacity, the Government should invest in a coordinated network of best practice. These Centres should support regional collaboration on curriculum development, shared teaching resources, staff training and assessment models aligned with employer needs.
5. **Scale and sustain place-based partnerships:** Existing local partnerships between Colleges, employers, trade unions and local/mayoral authorities have demonstrated strong outcomes. Parliament should ensure these are scaled nationally, supported with sustained multi-year investment, and embedded as a core delivery mechanism to guarantee fair and equitable access to green skills training across all regions of the UK. In accordance with just transition principles, trade unions should be included in these partnership bodies.

Conservative estimates, substantial needs

Our modelling of net workforce growth in power generation and construction shows:

- **£961 million** is required to train 121,000 workers in the energy generation and distribution sectors, especially at qualification levels 3-6.
- **£721 million** is required to train 186,500 construction workers, particularly at qualification levels 2-3, needed to build and retrofit the infrastructure of a net-zero society.

These are floor-level estimates. They are based on the lowest qualification level required, assume zero attrition and exclude capital investment. **Actual costs are likely to be significantly higher.** Without this investment, net-zero projects will stall due to labour shortages, rising project costs or low-quality delivery.

The system is expected to deliver without the tools to do so

FE colleges are central to vocational and technical training in the UK. However:

- **Colleges report severe instructor shortages**, especially in energy and construction-related fields
- **Pay for FE technical educators is significantly below industry levels**, with some roles paying nearly £25,000 more per year for a similar qualification level in industry.
- **Facilities are grossly outdated**. Colleges cite limitations in space, equipment and curriculum capacity to deliver green qualifications.
- **Government funding is fragmented** across multiple disparate funding streams and lacks alignment with net-zero priorities. **Short-term funding rounds discourage strategic investment** in course development and facilities.

Regional inequality and local readiness

There is no national framework to ensure equal access to green skills across the UK. Instead:

- Some areas, particularly coastal and post-industrial regions, have relatively strong provision (e.g. offshore wind in Scotland).
- Others, especially rural areas and parts of the Midlands and North East, have much poorer technical qualifications offerings in renewables, retrofit or power engineering.
- Workers from low-income areas are less likely to access green careers despite being more vulnerable to climate and economic shocks.

The current system risks **deepening existing regional inequalities** in direct contradiction to the principles of a just transition.

Local partnerships leading the way

Local/mayoral authorities, business and Further Education providers have developed promising models:

- **York's Housing Delivery Programme** embedded Passivhaus standards in its curriculum and public housing strategy.
- **East Devon Council delivered retrofit and solar training** to both residents and professionals through Exeter College.
- **SP Energy Networks and Forth Valley College** have sustained a 15-year partnership delivering HNC-level power engineering apprenticeships.
- **The London Green Jobs and Skills Partnership**, with £6.5 million in funding, is building Green Labs and employer-aligned training across nine boroughs.

These examples show that where investment, collaboration and strategy exist, green skills delivery can thrive.

Further information

Underlying research: [The Green Gap: Identifying the Deficit in Skills Funding Needed to Support the Net-Zero Transition](#) (2025) UCU, SOS-UK.

Contact details: mquick@ucu.org.uk