

Supplementary written evidence submitted by Imperial College London (WFP0136)

On Wednesday 5th March, I gave oral evidence to the ESNZ Committee as part of the inquiry into workforce planning for delivering clean, secure energy. This followed written evidence submitted to the Committee by the Energy Futures Lab and Imperial Policy Forum at Imperial College London¹. At the evidence session I shared key insights on challenges and opportunities in scaling up the workforce needed for the UK's energy transition. This supplementary submission clarifies key points made and provides further details of relevant resources.

Defining and Measuring Green Jobs: There is a policy need for clear metrics to assess not only whether a job is "green" but also to what extent its tasks contribute to net zero goals. Current government data sources, such as the Low Carbon and Renewable Energy Economy survey², lack the granularity needed to track occupations and skills required for clean energy jobs, while statistics on wider supply chain employment remain experimental³. The UK could learn from international metrics, such as the US O*NET system⁴, which captures the 'greenness' of work activities and technical and non-technical competencies needed for defined occupational roles. More robust data could support better workforce planning and policy decisions.

Data-Driven Workforce Planning: To track green jobs without overburdening businesses, innovative approaches could be used to automatically code job advertisements. For example, Nesta's Open Jobs Observatory⁵(OJO) is a pilot collaboration with the Department for Education that analyses job postings to identify trends in the distribution of green employment. This tool could be expanded for broader use. Instead of coding jobs by analysing text in adverts, as done by OJO and Cascot⁶, forthcoming work from the UKERC Win-Window project, looking at tracking green jobs, recommends that *employers* could be required to code advertised jobs using a revised Standard Occupational Classification (SOC) that better reflects both job greenness and job quality. This could streamline and improve accuracy in data collection for tracking progress in creating quality green jobs and identifying gaps in green skills (unfilled vacancies) – the latter could help inform policy for training and immigration. Currently, employers are required to use SOC codes when sponsoring skilled workers under the UK's immigration system but not for other recruitment.

A UK-Wide Skills Coordination Body: It is important that a central government organisation, such as the Office for Clean Energy Jobs, oversees workforce planning and co-ordinates with relevant organisations and initiatives in Scotland, Wales and Northern Ireland. However, transition planning should extend beyond the Clean Power 2030 mission to other sectors including buildings, heating, transport and industry. A national occupational framework could be developed to define core competencies for specific green job roles while allowing flexibility to be customised for local needs and circumstances.

Managing the Transition from High-Carbon Jobs: Many oil and gas workforce skills, such as offshore platform experience, geological modelling, and drilling, are transferable to sectors like floating offshore wind, geothermal energy, carbon capture and storage and hydrogen storage. However, policymakers must do more to link at-risk sectors with emerging opportunities. International best practice examples, such as Sweden's job security councils⁷, provide structured reskilling and transition support. High salaries in oil and gas remain a disincentive to leave the sector,

¹ committees.parliament.uk/writtenevidence/133075/pdf/

² <https://www.ons.gov.uk/economy/environmentalaccounts/bulletins/finalestimates/2022>

³ <https://www.ons.gov.uk/economy/environmentalaccounts/methodologies/lowcarbonandrenewableenergyeconomylcreesurveyqmi>

⁴ <https://www.dol.gov/agencies/eta/onet>

⁵ <https://www.nesta.org.uk/project/open-jobs-observatory/>

⁶ https://warwick.ac.uk/fac/soc/ier/data_group/cascot/

⁷ https://static.eurofound.europa.eu/covid19db/cases/SE-1974-43_2484.html

nevertheless average, online advertised salaries for clean energy jobs tend to be higher than equivalent advertised salaries for all UK jobs⁸.

Balancing Domestic and International Skills Supply: While the UK should develop local talent for roles such as heat pump installers, renewable energy construction and maintenance engineers, it is unlikely to meet all labour demands domestically, such as for manufacturing. Since migration is a highly contentious issue, careful thought should be given as to which type of positions would be open to migrants. An immediate way to contemplate green migration in the UK would be to revise the eligible occupations and codes for Skilled Worker visas and explicitly include green jobs where the internal candidate offer is not likely to cover the growing demand. Another option would be to create a similar resource which is compatible with the European Union's Talent Pool⁹, currently being piloted, which matches qualification profiles of labour migrants with job vacancies and employers across countries.

Driving Heat Pump Adoption and Building Retrofit Skills Development: Expanding the workforce will require raising consumer demand for heat pumps and home insulation, making the installation market more lucrative and stable for workers. Heat pump adoption could be further supported by reducing heat pump running costs, achieved through measures such as rebalancing levies on electricity and gas bills, or other energy market reforms. Reforming Energy Performance Certificates (EPCs) to better reflect real-world energy performance in buildings could help to increase consumer trust in building energy retrofit, drive uptake and, in turn, create a stronger incentive for firms to invest in data-led training and resources. Requirements to monitor the actual performance of heat pump installations ceased with the Domestic Renewable Heat Incentive (DRHI), but data on real world performance of heat pumps could have multiple benefits for consumers and suppliers: helping adopters find a trusted installer; weeding out poor installers; and as a learning and teaching resource for installer skills¹⁰.

Maximising Public and Private Investment: Stable and consistent policy support is essential for leveraging both public and private investment in workforce development. Industry-led initiatives, such as SSE Renewables, Equinor and Vårgrønn's Dogger Bank Wind Farm community fund, which supports local STEM education and skills projects in Yorkshire and the North East, demonstrate the role businesses can play in building a net zero workforce.

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⁸ <https://www.gov.uk/government/publications/clean-power-2030-action-plan-assessment-of-the-clean-energy-skills-challenge>

⁹ https://eures.europa.eu/eu-talent-pool-pilot_en

¹⁰ Carmichael, R. (2022) *Accelerating the transition to heat pumps: measuring real-world performance and enabling peer-to-peer learning*. <https://www.imperial.ac.uk/energy-futures-lab/reports/briefing-papers/paper-10/>
ERRATA on original submission (WFP0010): footnotes 22 & 23 should be this citation.