



International Partnership
for Hydrogen and Fuel Cells
in the Economy

UK country update – skills and workforce development for a hydrogen economy

Sophie SAUERTEIG and Justine FOSH

- Low carbon hydrogen will be **critical for achieving net zero**, particularly in “hard to electrify” **UK industrial sectors**, and can provide flexible energy deployment across **power, transport and potentially heat**.
- The Government’s ambition is for up to **10GW of low carbon hydrogen production capacity by 2030** with at least half coming from electrolytic hydrogen.
- The **UK Hydrogen Strategy (2021)** states that the **UK will require existing and new skills to achieve its hydrogen ambition**. We will work with stakeholders to understand the profile of required skills.
- A low carbon hydrogen economy could potentially **support 12,000 UK jobs** and **unlock £9bn in investment by 2030**.
- **By 2050, in a high hydrogen scenario, the hydrogen economy could be worth up to £13bn and support up to 100,000 jobs.**

The challenge

- Skills development if not addressed could act as a significant brake on the UK's hydrogen ambitions.
- **Many of the skills needed for the hydrogen and CCUS economy already exist in the UK** - skills such as engineering, procurement, construction and maintenance, project structuring, design and manufacturing, health and safety, commercial finance and legal services.
- Although much of the knowledge and skills are transferable, there are gaps which require **re-skilling of existing workers** (including on the safe handling of gas/liquid fuels, installation/maintenance of relevant technologies associated with fuel cells, electrolysers, knowledge of assessing salt caverns etc.).
- There are advantages of transitioning the workforce from high carbon sectors, however, these are also facing existing challenges (ageing workforce, existing skills shortages/high competition, ED&I) (risk of importing disparities).
- To enable **upskilling of workers and inspire new entrants to the sector**, interventions will need to be delivered at every level (school, university, apprenticeships, research leaders).

Developing a strategic approach

Understanding the workforce and skills gaps and opportunities

- **Undertaking hydrogen workforce assessment** which looks at projected labour demand across occupations, drivers of gaps, the effectiveness of current government/industry actions (apprenticeships, skills bootcamps, T-levels), additional actions to address these issues (gathering existing best practice, improve workforce planning/forecasting of skills by improving data on needs in local areas, standardising national/local data sourcing, skills passporting, modular delivery of training, attracting new entrants, awareness of opportunities & career pathways).

Developing a strategic approach for the development of hydrogen skills

- **Working in partnership with key stakeholders across industry and academia** to develop priorities and implement interventions around ensuring opportunities for reskilling and upskilling workers from other industries and inspire new entrants to the sector.
- **Shaping the development of the wider Green Skills agenda by working with the Green Jobs Delivery Group** (co chaired by Minister, bringing together key government departments (ie. DfE, DWP, DEFRA, HMT) and industry) which is the main vehicle for driving the strategy and ensuring a cross-sectoral view of common and specific workforce challenges, skills gaps, and implement interventions.

Actions

- ✓ Published **Sector Development Action Plan (2022)**: Sets out what actions government and industry will take to support hydrogen skills.
- ✓ **Established the Hydrogen Delivery Council's Jobs, Skills, and Supply Chains Working Group (July 2023)** which is considering a strategic approach to the development of skills to ensure near and long-term needs are met.
- ✓ **Undertaken a workforce skills assessment (August 2023)** which looks at project demand, gaps, and opportunities for further government/industry actions.

Next steps

- **2024: Green Jobs Plan** – set our recommendations to tackle gaps across sectors.