

Future Skills for Energy Transition

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Inspirational, Influential, Inclusive



BACKGROUND

Future Generations Commissioner for Wales
Green Jobs Taskforce
Skills for Jobs White Paper
Better Homes, Better Wales, Better World
Going Green
OptimisedRetrofit
Homes of today for tomorrow
Heat Network Skills Initiative
Building Skills for Net Zero
Climate Emergency Skills Action Plan 2020-2025
UK Hydrogen Strategy

Green Jobs and Priority Sectors

Every job has the potential to become 'green' Green Jobs Taskforce

Emsi : identified 366 "green" job titles, on account of their being connected to things like conservation, environment, energy efficiency, recycling, renewable energy, solar power, sustainability

Priority Sectors

Power

Home and Buildings

Natural Resources

decarbonisation

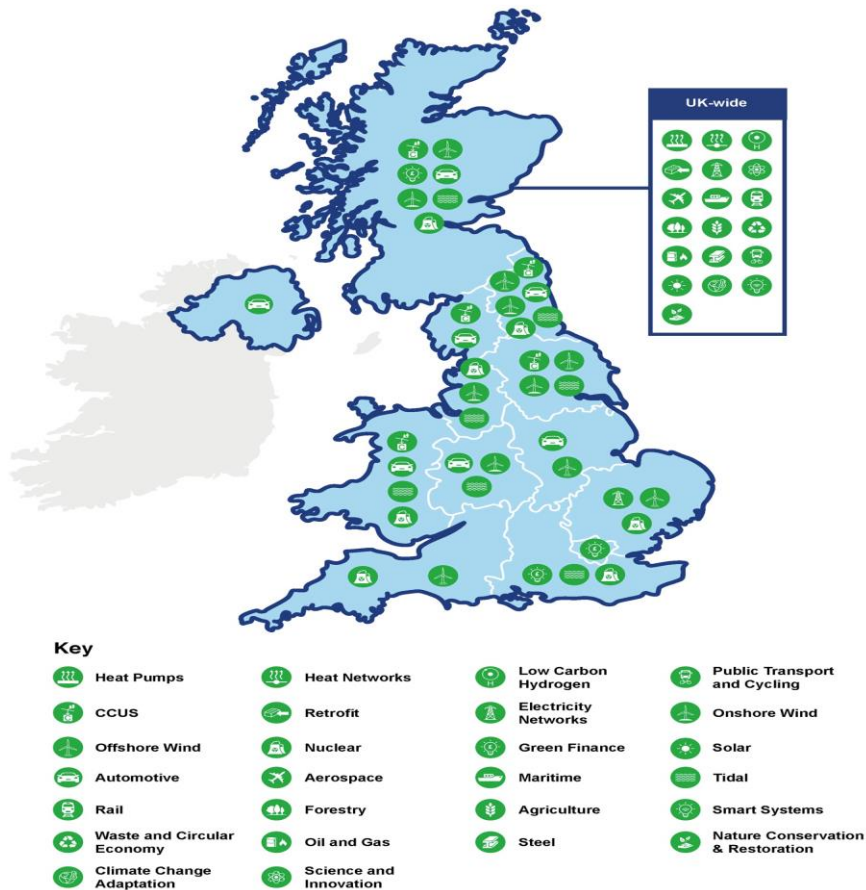
Climate adaptation

Business and Industry

Transport

Enabling

Potential regional employment opportunities and skills needs as UK sectors transition to net zero. *Green Jobs Taskforce*



- **The October 2021 report ‘Heat and Buildings Strategy’ Presented to Parliament by the Secretary of State for Business, Energy and Industrial Strategy** by Command of Her Majesty highlighted the case for investing in skills and sets out the ways in which government and industry can work together to achieve it. The main points relating to skills:
- *There are over 140,000 plumbers and heating and ventilation engineers in the UK there are 114,000 FTE jobs in the efficient products sector, and 2.4 million in construction.*
- *Approximately 80% of people who will be working in the UK in 2030 are already working today. We know that the transformational change needed to deliver the quantity and quality of building improvements by 2050 will impact those currently working in built environment and heating-related roles, including natural gas engineers.*
- *According to a recent Construction Industry Training Board (CITB) survey, approximately 90% of builders stated they would be willing to retrain, as demand for new roles and skills’ changes in the future.*

Investment in Key infrastructure projects

Investment in key infrastructure projects in green industries and nature restoration could create at least 45,000 direct jobs and over 60,000 indirect jobs by 2022.*

Including:

5,280 jobs
Railway
Construction



3,426 jobs
Research &
Development



2,810 jobs
social housing
construction



5,870 jobs
Renewable
energy and
port upgrades



4,260 jobs
retrofit insulation
of housing



3,600 jobs
reforestation
and natural
flood defence



6,560 jobs
off-site housing
manufacture



2,725 jobs
bicycle and
pedestrian lanes
construction




1,500 jobs
Electrical
Installations



Managed Well A retrofit Programme could be a game changer for Welsh Economy

At the moment:


10% of Wales' greenhouse gas emissions come from the residential sector 


155,000 homes are in fuel poverty 


poor housing contributes to ill health 


Managed well, a retrofit programme could be a gamechanger for the Welsh economy helping to:

meet decarbonisation and fuel poverty objectives 

eradicate fuel poverty and reduce needless energy costs, saving a total of £8.3 bn in fuel costs by 2040 

 generate cost saving to the NHS - £4.4 bn by 2040

create new industries, skills and up to 26,500 new jobs, based on local supply chains 

support the foundational economy with potentially millions of local spend. 

Key Aspects

- Analyse the demand and skills needed – map against existing provision
- Create training and qualifications that meet these skill gaps
- Invest in training infrastructure to develop high quality training and create a talent pipeline – be innovative
- Promote job opportunities that are attractive to those wishing to upskill and to new entrants



Skills and Qualifications

Identifying, Reviewing and Mapping

- ✓ **Are the current qualifications fit for purpose?** There is currently an MCS accredited Heat Pump installer training program but only covers the plumbing 'wet side' of the technology. As the installation of heat pumps greatly increases there needs to be recognition of the RACHP specific training that will be required when the units need servicing or maintenance. There is a manufacturers course that has recently been introduced for this but nothing accredited. In the new suite of qualifications for Building Services in Wales commencing in September 2022 the RACHP apprenticeship has not been included – we are still pushing for its inclusion
- ✓ **Review existing frameworks for apprentices and College Qualifications-** create a 'green Energy' Apprenticeships The development and introduction of a specific green technology courses framework. identify existing quals that can be adapted utilised from other devolved nations
- ✓ To ensure energy efficiency upgrades and low carbon heating systems are **compatible with each other when installed**
- ✓ **incentivise certification** to the standard required and create work with industry to support training and new routes of entry in key skills shortage areas.
- ✓ **Look at existing provision and training** : There are a wide variety of courses available across UK and Europe – adapt these roll them out, some examples include:
 - Nationally accredited Retrofit Co-ordinator course by the Retrofit Academy
 - Online Carbonlite Retrofit course by the Association for Environmentally Conscious Buildings
 - Energy Efficiency Measures for Older and Traditional Buildings course, by the Environment Study Centre (quality-assured by CITB ,resulting in an award from the SQA)
 - Green Register** also provide a range of 'middle-level' courses

Develop High Quality Training & Certification



- ✓ **Expand existing training standards/apprenticeships/qualifications** to require understanding of whole heating system High quality Job standards for retrofit industry
- ✓ **To coordinate funding support for training providers/colleges/universities** and help installers find appropriated accredited and high quality training [providers
- ✓ Existing heating engineers upskilled in a week. 3-4 years new entrants
- ✓ **Work with Industry** -There are British Standards Institution (BSI)standards in place for energy efficiency retrofit. Incentivise certifications work with industry to support training and new routes of entry in key skills shortage areas.
- ✓ **Develop accredited high quality upskilling programmes** for existing workforce. (PLA)
 - ✓ Investment in industrial development of staff across FE sector
 - ✓ Investment in resources
- ✓ **Link with employers, qualifications Wales, Welsh Government and training providers** to develop a consistent skills strategy underpinned with funding and investment in new technologies
- ✓ **Learn lessons from Europe** – Study by Kings College London
- ✓ **Ensure high quality installations** and public trust and as demand for natural gas engineers and electricians decline we need to retrain and develop specialisms in smarter greener and cleaner technologies and quality assure these. Robust IQA /Certification process

Upskilling and Creating Future Talent



- ✓ **To increase the attractiveness of the industry** to new labour market entrants and opportunities for workers looking to retrain
- ✓ **Create Energy/Heat Academies** working with FE/HE, Employers and Manufacturers
- **The need for education and provision of a greater in-depth knowledge of the use and benefits of green technologies from primary school** to general public and businesses. The increased interest will then naturally lead to a greater interest and uptake of the installation of green technologies, leading to an increase in jobs in the sector and an improved economy.
- **The continued investment in FE colleges to develop**, support and implement green technology training to include re-training of the existing workforce.
- **Collaboration** – There needs to be a collaborative, innovative approach working with the devolved nations, UK government and also looking further afield to share best practice and experiences with the current world leaders in green technologies with the end goal of achieving net zero.
- **Links with employers/manufacturers/installers** to develop skilled and employable people

Creating Talent and World Class Skills

- Create Inspiring Skills and WorldSkills UK competitions for apprentices and learners
- Enhanced Work experience opportunities
- Embed into New Curriculum for Wales – don't leave it to chance
- Career Advice and guidance
- Use of technology to stimulate and excite interest
 - co- design Priority Skills Academies with employers
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- Investment in Centre of Excellence and Excellence Skill leaders distributed across college and training providers, Employers linked to schools/regions/Colleges
- Pilot upskilling projects with local authorities and/or housing association and schools
- Develop resources with manufacturers.

