

Energy Action Scotland Conference

Heat Decarbonisation Challenges and Opportunities

Reviewing and enhancing existing evidence to support the decarbonisation of domestic and commercial heating and identify gaps

What is the background to the work?

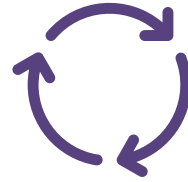


Climate Emergency Skills Action Plan (CESAP) outlines the need for action to ensure that current and future skills investment in support of net zero **is strongly evidence based** and the skills system across Scotland **can respond** to changing demand

The Pathfinder is a direct response to this.

CESAP Priority Area 2:

Building better understanding and evidence of future skills needs to support Scotland's transition to net zero



Requires a **dynamic skills system** that creates **agile, adaptive and resilient workers**, with skills to secure and progress in the current and future labour market



Two complementary work packages:

WP1

An evidence based approach to supporting the transition to net zero

→ Strengthening the evidence base

WP2

Decarbonisation of domestic and commercial heating pilot

→ Test of change case

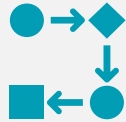
Wider Operating Context

Policy



- **Regulatory drivers** will shape demand

Quality Assurance Systems



- **Quality Assurance** schemes have **barriers to entry**
- View there is a need for quality assurance systems that focus on **individual competence**

Employers asks



- Clear **Pipeline** of work (large employers)
- **Funding** and support to access funding (small & micros)
- **Adapt** Training and qualifications at pace
- **Support** to increase number of new entrants to allow workforce to scale-up

National Construction Stakeholder Landscape



- **Complex**, many stakeholders
- **Construction Accord** critical but at early stages
- Net Zero **high profile but not B.A.U**

Investment & Funding



- Planned investment versus costs – small %
- **workforce** - balance demand & supply of skilled workforce

National Perspective

Skills Demand – issues and challenges

Lack of skilled workers at time of growing demand

Significant and growing demand identified:

- Mid-term (2024-2027) **38,800 job openings forecast**
- Long-term (2027-2034), **48,200 job openings forecast.**

Concern too few with skills to **install, maintain and promote low carbon heating products (and to provide infrastructure to support)**

Skills gaps for key trades anticipated to rise sharply.

Competing demands

Jobs vital to heat decarbonisation **cut across a number of industries and within construction multiple work areas.**

Many of the skills and same workforce pool used for non-heat decarbonisation work

Shortages in key occupations

Shortage of retrofitters (designers, advisers, co-ordinators) could emerge as pace of retrofitting homes and buildings accelerates.

High demand for key occupations

Jan-Sept 2022 – 2,400 job postings in industries and occupations relating to heat decarbonisation – 0.4% of total advertised. Currently particularly high demand for **plumbers and heating and ventilating engineers, carpenters and joiners** across Scotland.

Provision

**College provision aligning to skills required
BUT does not ensure needs are always met**

**Growth in MAs in key occupations (as result
of wider construction environment)**

**Course content will need to adapt and at
pace to reflect changing landscape**

**Resources to grow and upskill college
lecturers**

Retention Issues

- **Strong retention of MAs**
- **No guarantee a learner will look for and secure a job in the field**

**Need to increase apprenticeship starts for
key trades**

**Financial barriers to businesses recruiting
apprentices**

Evidence gaps

- **Difficulty identifying upskilling and reskilling activity - a key component of training provision.**
- **Lack of data on employer funded upskilling activity.**

Considerations

High growth Industries	Employment in industries related to heat decarbonisation in Scotland has grown at a faster rate than employment in all industries across the country - between 2020 and 2021 (12.7% in heat decarb industries compared to 2.8% all industries).
Talent attraction and retention	Opportunity to attract and retain more women to the sector. Talent attraction and sector inclusiveness will therefore be an important component for employers if demand is to be met.
Upskilling of existing workforce	Largest employing heat decarb sector in 2021 was Construction of domestic buildings (16.5% total heat decarb employment) and Other engineering activities (14.4%). Many job roles in heat decarbonisation will come from existing workforce - those already in employment may be required to adapt their skills to help meet the governments targets
Tapping into adjacent sectors	As occupations vital to heat decarbonisation cut across number of industries, the heat decarbonisation workforce could be expanded by tapping into adjacent sectors.

Regional Context and Insight: Glasgow City Region

Current / planned heat decarb activity

- Glasgow City Region Economic Strategy – tackling climate emergency is one of three grand challenges.
- Clyde Mission – using the Clyde to drive sustainability.
- Glasgow Green Deal

Wider net zero activity in the region

- Clyde Climate Forest
- Climate Neutral Innovation District
- Charing Cross M8 Green Infrastructure Cap
- Glasgow Metro
- Advanced Manufacturing Innovation District Scotland
- Green Regeneration and Innovation District

Opportunities raised by partners

- Glasgow City Region Home Energy Retrofit programme: ten year **£10 billion** programme to upgrade the insulation of all homes in the Glasgow City Region to achieve net zero carbon emissions.
- Glasgow's District Heating Network - scaling up the achievements of the **£154 million** Glasgow Recycling and Renewable Energy Centre (GRREC) to kick-start a wider district heating network.

Challenges raised by partners

- **Investment timelines** – Many projects require external investment to go ahead.
- Existing skills provision – there is **reluctance to upscale amongst FE in the region without more certainty.**
- Governance – there are multiple reviews of governance currently underway.
- Utilising best practice – there are examples of good practice which sit outwith the main existing structure.

Regional Context and Insight: Shetland

Current / planned heat decarb activity

- **ORION Clean Energy Project** - aims to position Shetland as a green energy hub by using wind and tidal power to generate hydrogen and electrify oil and gas installations.
- New **housing developments**, with an ambition of working toward passivehaus standards and expanding Community District Heating Schemes.

Challenges raised by partners

- **Limited local skills provision** - Many employers are unable to source training locally and the cost of travel and accommodation to get the workforce trained can also be prohibitive.
- **Fuel Poverty**. Fuel poverty is a significant issue in Shetland with recent reports suggesting rising fuel costs will increase to the point where 96% of households could be spending 10% of their income on energy.

Opportunities raised by partners

- **Shared Prosperity Fund – £300,000**
Shetland Islands Council 5-year investment plan which includes funding for Green Skills.
- **Scottish Academy for Construction Opportunities (SACO) - £1.3m**. SACO to enable construction career opportunities for people from local communities, and to create a talent pipeline to meet the needs of local construction employers.
- **Islands Growth Deal TalEntEd Islands Programme - £3m**
- **Coastal Communities Fund**
- **Shetland Business Transition Fund - £200,000**
- **The Business Transition Fund**

Finally.....

1. Glasgow region Hub Research
2. Shetland activity – Tbc - Stephen
3. Remain a priority area, need to be joint effort round raising awareness of scale of challenge, which is further added to by multiple areas having similar labour pool