



Scottish Funding Council

Promoting further and higher education

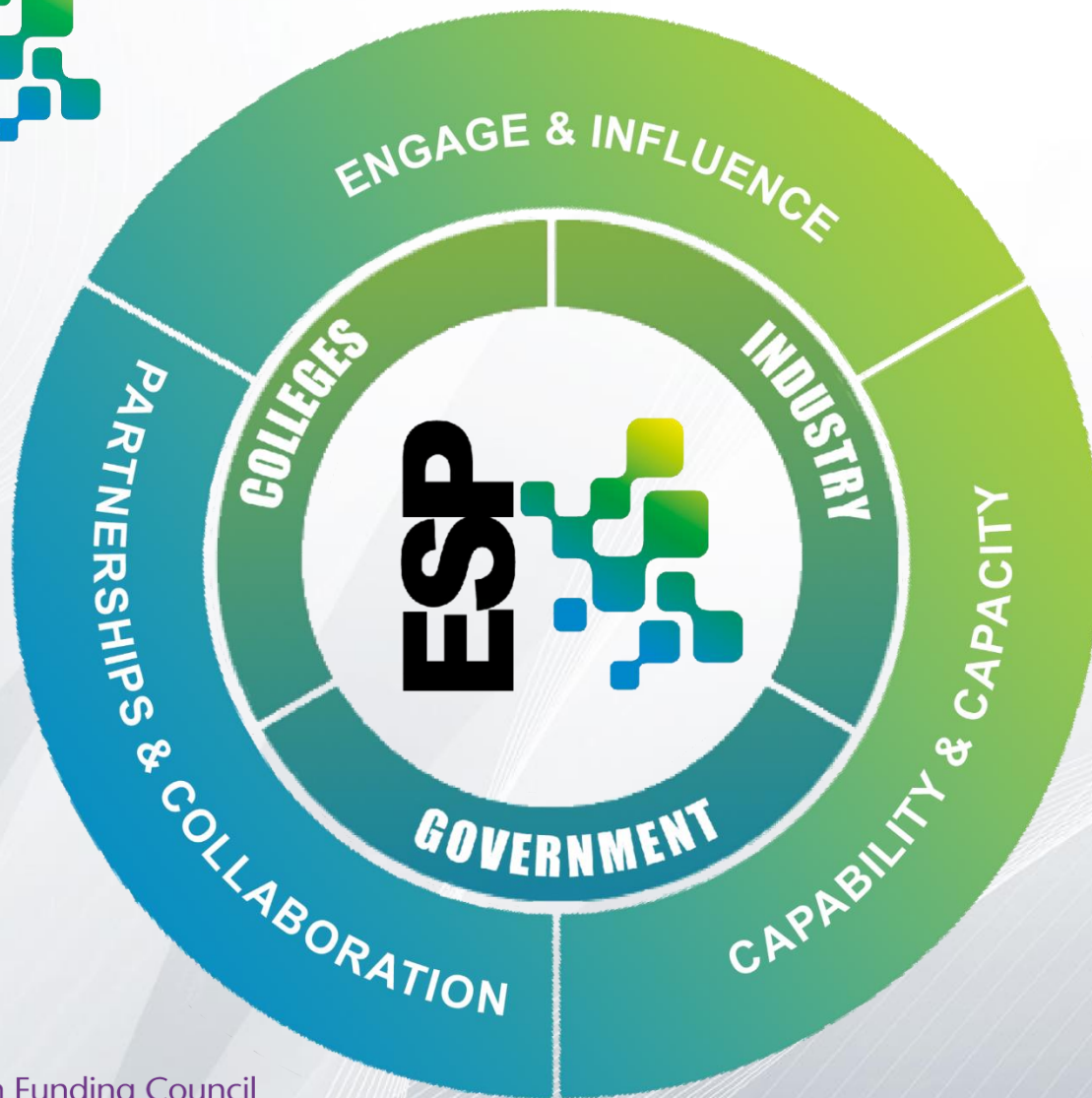
SCOTLAND EXCEL

Green Skills for a Net Zero Future

John Renwick
Sector Manager
Construction
ESP



Scotland's colleges – delivering skills for the energy, engineering and construction sectors



About us

WHO ARE WE?

ESP is the college sector agency in Scotland for the energy, engineering and construction sectors. Whilst also being the college sector lead for STEM and the college sector agency leading on the Climate Emergency Skills Action Plan.

OUR VISION

A college sector working in partnership with Government, agencies and industry to meet national and regional skills needs, maximising investment and job opportunities aligned with emerging technologies, the **Climate Emergency** and the **Just Transition to Net Zero**.



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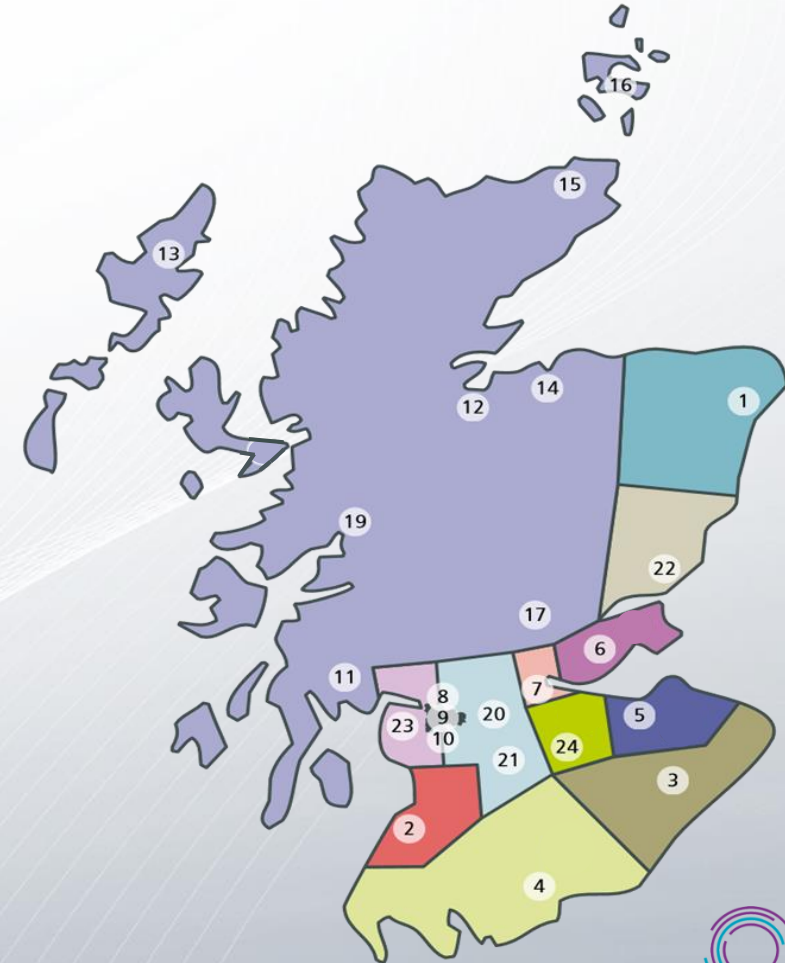
Scotland's colleges – delivering skills for the energy, engineering and construction sectors



Scotland's Regional Colleges



Aberdeen & Aberdeenshire	1- NESCol (Inc. Fraserburgh)
Ayrshire	2- Ayrshire College
Borders	3- Borders College
Dumfries & Galloway	4- Dumfries & Galloway College
Edinburgh & Lothians	5- Edinburgh College
Fife	6- Fife College
Forth Valley	7- Forth Valley College
Glasgow	8- City Of Glasgow College
	9- Glasgow Clyde College
	10- Glasgow Kelvin College
Highlands & Islands	11- Argyll College UHI
	12- Inverness College UHI
	13- Lewis Castle UHI
	14- Moray College UHI
	15- North Highland College UHI
	16- Orkney College UHI
	17- Perth College UHI
	18- Shetland College UHI
	19- West Highland College UHI
Lanarkshire	20- New College Lanarkshire
	21- South Lanarkshire College
Tayside	22- Dundee & Angus College
West	23- West College Scotland
West Lothian	24- West Lothian College



Scotland's colleges – delivering skills for the energy, engineering and construction sectors



SCOTTISH COLLEGES' STATEMENT OF COMMITMENT ON THE CLIMATE EMERGENCY

- ☐ Scotland's colleges aiming to achieve net-zero by 2040 or earlier.
- ☐ Address the UN's Sustainable Development Goals
- ☐ Share best practice
- ☐ Deploy our expertise and experience to combat climate change
- ☐ Contribute to public debate on climate change and use the power of our example to encourage others.
- ☐ Embed environmental sustainability
- ☐ Work with Scottish industry, employers, public sector bodies
- ☐ Encourage, colleges to adopt UK HE/FE Climate Commission's Climate Action Roadmap
- ☐ College to publish a 5 year action plan to address the climate emergency
- ☐ Educate staff, students, employers and communities on environment/climate issues

Scotland's colleges – delivering skills for the energy, engineering and construction sectors



2022

2045



Transition to Net-Zero



Skills Pipeline Demand

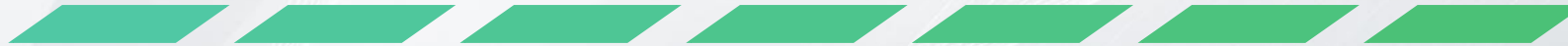
Current rates around 3,000 households per year install low and zero emissions heating



By 2025 the expected installs target is 64,000



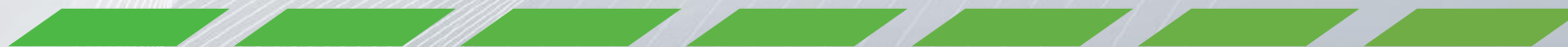
Late 2020's Peak at over 200,000 per year



Estimated 4,300 Plumbing and HVAC engineers will be required by 2028



By 2028 22,500 people will require to be upskilled



Scotland's colleges – delivering skills for the energy, engineering and construction sectors

- Low carbon accredited training courses
- Retrofit for supervisors SCQF L7

Upskilling
tradespeople

- 5000 school leavers undertaking pre-apprenticeship courses.
- 20,000 undertaking construction courses
- Work placement

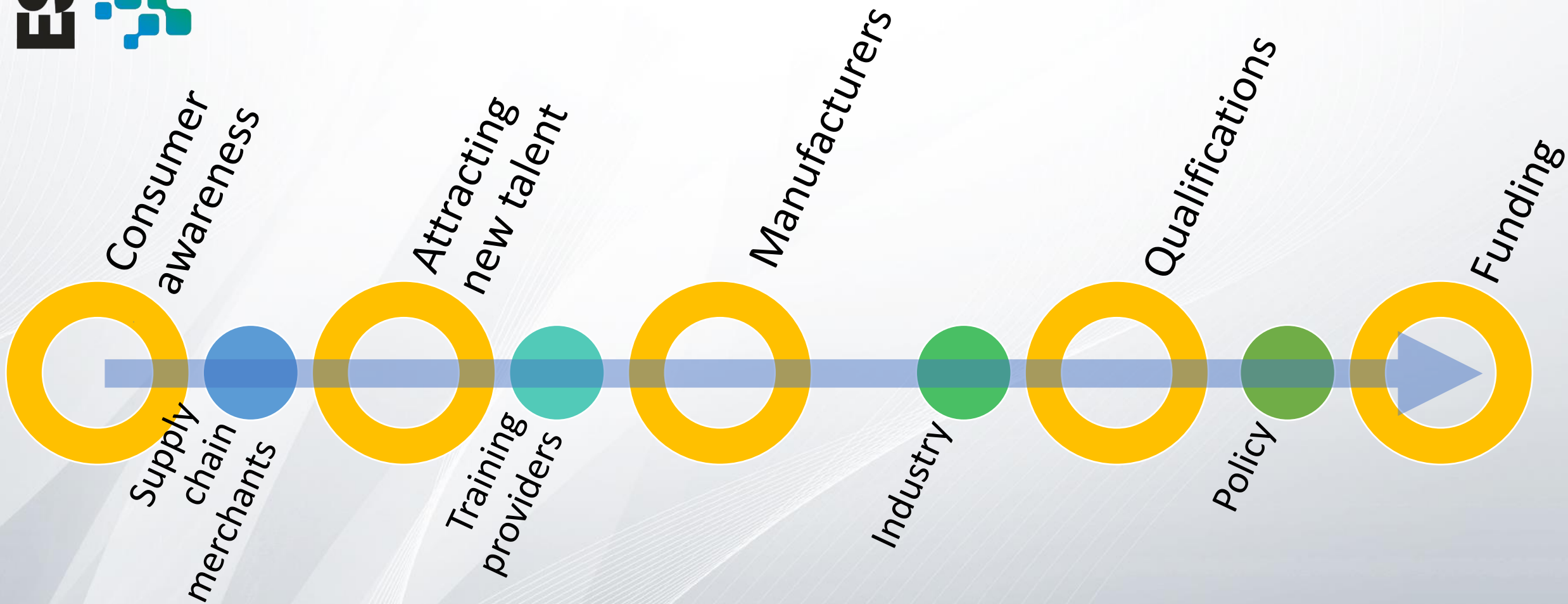
Skills Pipeline

Upskill
local authority and housing association staff

Opportunities

- Energy Efficiency Awareness
- Transition at pace, senior leaders
- Limited Scope for non installers
- Courses designed to your needs







Scotland's Colleges

Energy Efficiency
&
Low Carbon Heat
Training Facilities



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✓	Under Development	Updated: 26 th May 2022	Ayrshire College	Borders College	Glasgow Clyde College	Dumfries & Galloway College	Dundee & Angus College	Edinburgh College	Fife College	Forth Valley College	Glasgow Kelvin College	Lewis Castle College	Moray College	NESCol	Perth College UHI	South Lanarkshire College	West College Scotland	West Lothian College	New College Lanarkshire	City Glasgow College
		Level 3 Award in Energy Efficiency Measures for Older and Traditional Buildings																✓		
		Air Tightness	✓	✓					✓							✓		✓		
		Thermal Imaging	✓	✓					✓	✓								✓		
		SMART Control systems	✓	✓	✓				✓	✓							✓			
		Internal Wall Insulation					✓	✓								✓		✓		
		External Wall Insulation					✓	✓								✓	✓	✓		
		Battery Storage	✓	✓	✓			✓		✓							✓			
		Ground Source Heat Pumps	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓			
		Air Source Heat Pumps	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓			
		Solar Thermal	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓			
		Solar Photovoltaic		✓	✓	✓		✓		✓						✓	✓			
		Rainwater Harvesting			✓			✓		✓										
		Mechanical Ventilation Heat Recovery		✓				✓								✓				
		Grey Water System						✓		✓										
		Electric Boiler								✓										
		Electric Vehicle Charging			✓	✓	✓					✓					✓			
		Solid Biomass				✓										✓				
		Smart Metering							✓							✓			✓	✓

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AS/GS HP Training

COMPETENCE

The Scottish Installers Skills Matrix

ABILITY

SKILLS

For installers working in the energy efficiency and low and zero carbon technologies sector

ADVANCED
TRAINING

GROWTH

February 2022: The installer skills matrix has now been incorporated into the updated BSI PAS 2030 (2019) standards (referred to as A1 – amendment 1). Specifically the matrix is mentioned in chapter 3 ‘terms and definitions’ Link to skills matrix is here - [Scottish Installer Skills Matrix \(esp-scotland.ac.uk\)](https://www.esp-scotland.ac.uk/skills-matrix)

- The skill requirements listed in the installer matrix also forms a key part of the Scottish Government’s broader [Climate Emergency Skills Action Plan \(CESAP\)](#) which was published alongside the Climate Change Plan update in December 2020.
- Creating the skills matrix is just the beginning and the stakeholders involved with its development will continue to review this. Consequently the skills matrix may evolve over time
- For small-scale renewables, the Microgeneration Certification Scheme (MCS) welcomes the installers skills matrix. The scheme plans to link to the matrix to help installers understand the training and qualifications they need to demonstrate their competency. MCS are engaging with the sector’s skills bodies to map core competencies.



Scottish Government
Riaghaltas na h-Alba
gov.scot



SNIPEF
Plumbing and heating association



Any comments or suggestions in relation to the skills matrix please email skillsmatrix@esp-scotland.ac.uk



ENERGY EFFICIENCY SYSTEMS	CITB	SNIEF	SELECT	BESA	EU Skills	System	Mandatory	Must complete all qualifications from this group
GREY WATER HARVESTING		✓				Grey Water Harvesting	M	SVQ 3 Domestic Plumbing and Heating at SCQF Level 7
Heat Battery		✓					M	Water Byelaws
SOLAR THERMAL		✓		✓			Optional	Only for those working in Pe-1919 Buildings
AS/GS HEAT PUMPS		✓		✓			O	- SQA Level 3 Award in Energy Efficiency Measures for Older and Traditional Buildings
WARM AIR HEATING UNITS		✓		✓	✓			
BIOMASS		✓		✓		System	Mandatory	Must complete all qualifications from this group
DOMESTIC GAS BOILERS & Water Under Floor Heating		✓		✓	✓	Heat Battery	M	SVQ 3 Domestic Plumbing and Heating at SCQF Level 7
HYDROGEN		✓			✓		M	Water Byelaws/Regs
MECHANICAL VENTILATION HEAT RECOVERY		✓	✓	✓			M	Vented/Unvented Hot water
SMART HEATING CONTROLS		✓	✓	✓				
MICRO COMBINED HEAT & POWER		✓	✓		✓	System	Mandatory	Must complete all qualifications from this group
ELECTRICAL STORAGE HEATERS			✓			Solar Thermal	M	NOS Mapped - Installation and Maintenance of Solar Thermal Hot Water Systems
SOLAR PV			✓				M	Water Byelaws/Regs
Micro Hydro			✓				M	Vented/Unvented Hot water
Micro Wind Turbines			✓				Optional	Plus one of the following occupational career paths
Lighting Controls			✓				O	SVQ 3 Domestic Plumbing and Heating at SCQF Level 7
Electrical Under Floor Heating			✓				O	SVQ 3 Heating and Ventilating: Industrial and Commercial Installation
ELECTRIC VEHICLE CHARGING EQUIPMENT			✓				Optional	Only for those working in Pe-1919 Buildings
Battery Storage			✓				O	- SQA Level 3 Award in Energy Efficiency Measures for Older and Traditional Buildings
External Wall Insulation	✓							
Internal Wall Insulation	✓					System	Mandatory	Must complete all qualifications from this group
Cavity Wall Insulation	✓					Air Source & Ground Source Heat Pumps	M	NOS Mapped - Install and Commission Fuel Systems: emergent technologies
HTT Cavity Wall Insulation (Hard to Treat)	✓						M	Water Byelaws/Regs
Loft/ Rafter/Room in Roof Insulation	✓						M	Domestic Vented and Unvented Hot Water Storage
Under Floor Insulation	✓						Optional	Plus one of the following occupational career paths
Low Rise Windows and Doors	✓						O	SVQ 3 Domestic Plumbing and Heating at SCQF Level 7
Flat, Pitched and Extension Roofs	✓						O	SVQ 3/SCQF 6 Install, Commission and Maintain Refrigeration Systems
High Rise Windows and Doors	✓						O	SVQ 3/SCQF 6 Install, Commission and Maintain Air Conditioning Systems

DEMO PURPOSES ONLY



Occupational career paths	Mandatory	Must complete all qualifications from this group
	M	SVQ 3 Domestic Plumbing and Heating at SCQF Level 7



Heat Pumps Installer

Accredited

**SVQ - Plumber, Heating,
Refrigeration or Ventilation
Engineer**

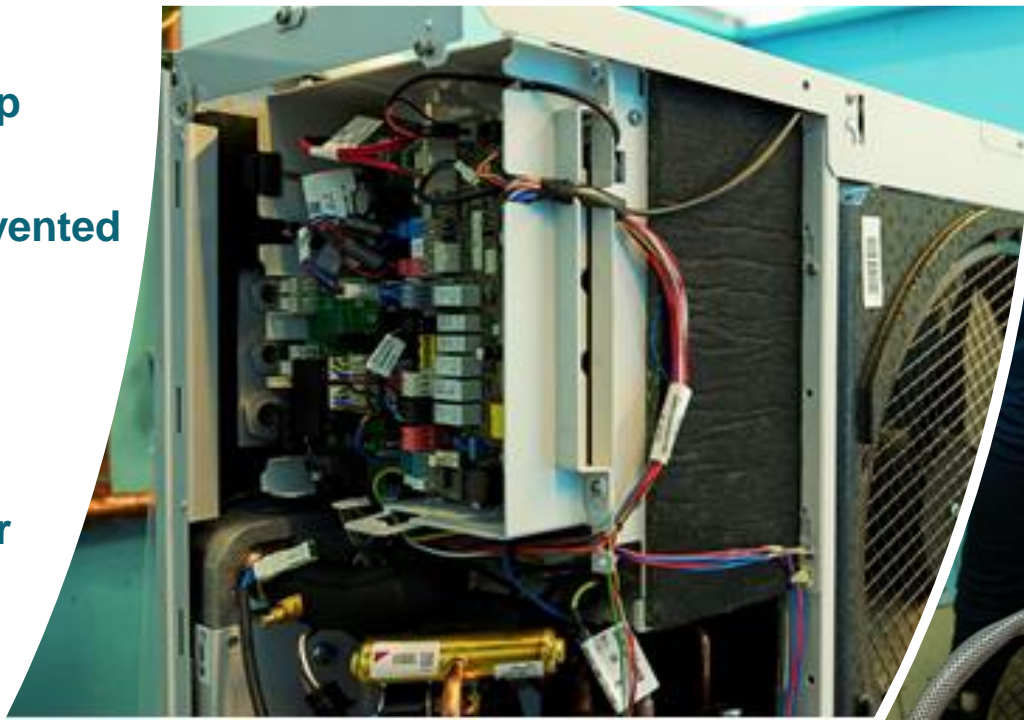


Bolt-On

- NOS Mapped – Heat Pump
- Water Byelaws/Regs
- Domestic Vented and Unvented Hot Water Storage

**AND (only if working on pre-
1919 buildings)**

**Level 3 Award in Energy
Efficiency Measures for Older
and Traditional Buildings**



**FLEXIBLE
WORKFORCE
DEVELOPMENT
FUND**



**FILL YOUR
SKILLS GAP**

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ARE YOU ELIGIBLE?

Levy Payers can access up to
£15,000 and SMEs can access
up to £5,000 of training

National Transition Training Fund

Jan –June 2022

Contact your regional
college to access

	Heat Pumps	Solar Thermal	18th Edition
<u>Dundee & Angus College</u>			X
<u>Forth Valley College</u>			X
<u>West College Scotland</u>	X	X	X
<u>NESCOL</u>			X
<u>Edinburgh College</u>	X	X	X
<u>Ayrshire College</u>			X
<u>Borders College</u>	X		X

Eligibility criteria has been broadened to include the following characteristics.

Learners must be 25+ years old and either:

- unemployed, at risk of redundancy or their job under threat as a result of COVID-19 or the economic impact of EU Exit, or
- have identified a skills gap in their current job or to return to employment, or
- have identified a skills gap as part of the [‘Just Transition’ to net zero.](#)



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