

Installer Skills and Quality Assurance for Solar PV

Green Heat Installer Engagement
Programme

01 March 2023



Presenters

| | | |
|-----------------|---|----------------------|
| Pilar Rodriguez | Green Heat Installer Engagement Programme Manager, Energy Saving Trust | Presenter, Q&A Panel |
| John Renwick | Sector Manager, Construction, ESP | Presenter, Q&A Panel |
| Alistair McKean | Training and Business Development Manager, Forth Valley College | Presenter, Q&A Panel |
| Harry Hunter | Commercial Trainer (Renewables), Forth Valley College | Presenter, Q&A Panel |
| Graham Martin | Commercial Growth Officer, Forth Valley College | Q&A Panel |

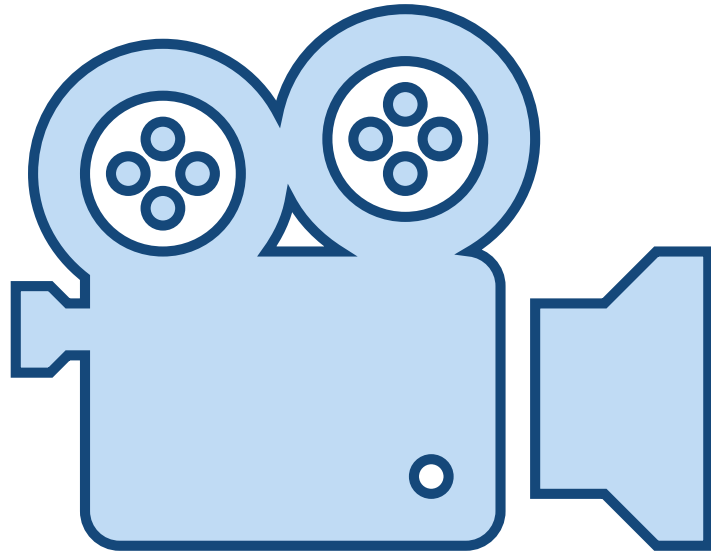
Questions

Type questions into the **Questions** pane of the control panel

You can send in your questions at any time during the presentation. These will be collected and addressed during the Q&A session at the end of the presentations.



Recording



This webinar is being recorded but your name and attendance is hidden from the recording.

The recording will be uploaded and will be made available to watch again.

Details of how to do this will be shared with you via email, after the webinar has ended.

Have Your Say



There will be a short feedback survey after the webinar has finished.

Please complete this if you can so we can continue to improve the webinars we offer.

Decarbonising Scotland's buildings – Heating in Building Strategy

Pilar Rodriguez
Green Heat Installer Engagement Programme



Emissions

2022

2024

2025

2030

2033

2040

NET ZERO
2045

Emissions
from buildings
**68% lower than
2020 levels**

**75%
REDUCTION**

**90%
REDUCTION**

New build homes to
use zero emissions
heating & cooling

Phasing out
fossil fuel boilers
in **off gas** areas

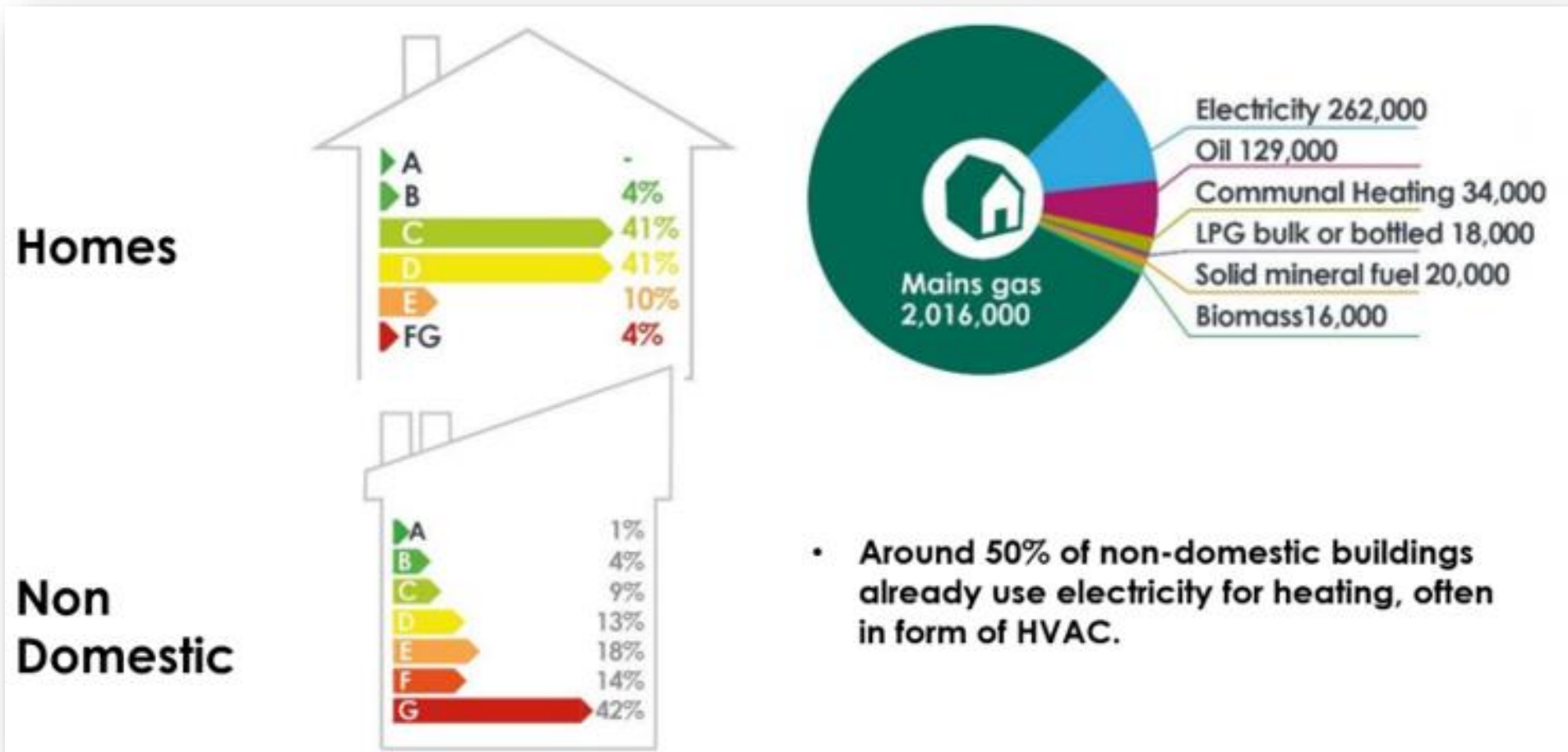
Phasing out fossil fuel
boilers, in **on gas** areas
All homes reaching **EPC C**

This requires zero emissions heating in:

- The vast majority of the **170,000 off gas homes**
- At least **1 million on-gas homes**
- **50,000 non-domestic buildings**

***“OUR HOMES
AND BUILDINGS
NO LONGER
CONTRIBUTING TO
CLIMATE CHANGE”***

Where are we now



- Around 50% of non-domestic buildings already use electricity for heating, often in form of HVAC.

How are we going to get there

Low and Zero Emissions Heating Systems

Systems that have **zero direct greenhouse gas emissions** such as individual electric heat pumps and connection to heat networks, or electric systems such as storage heaters, and systems that have very low emissions such as those that use hydrogen.

No and low regrets strategic technologies

Energy efficiency



Heat pumps in off gas areas



Heat pumps in on gas areas



Low and zero emissions heat networks



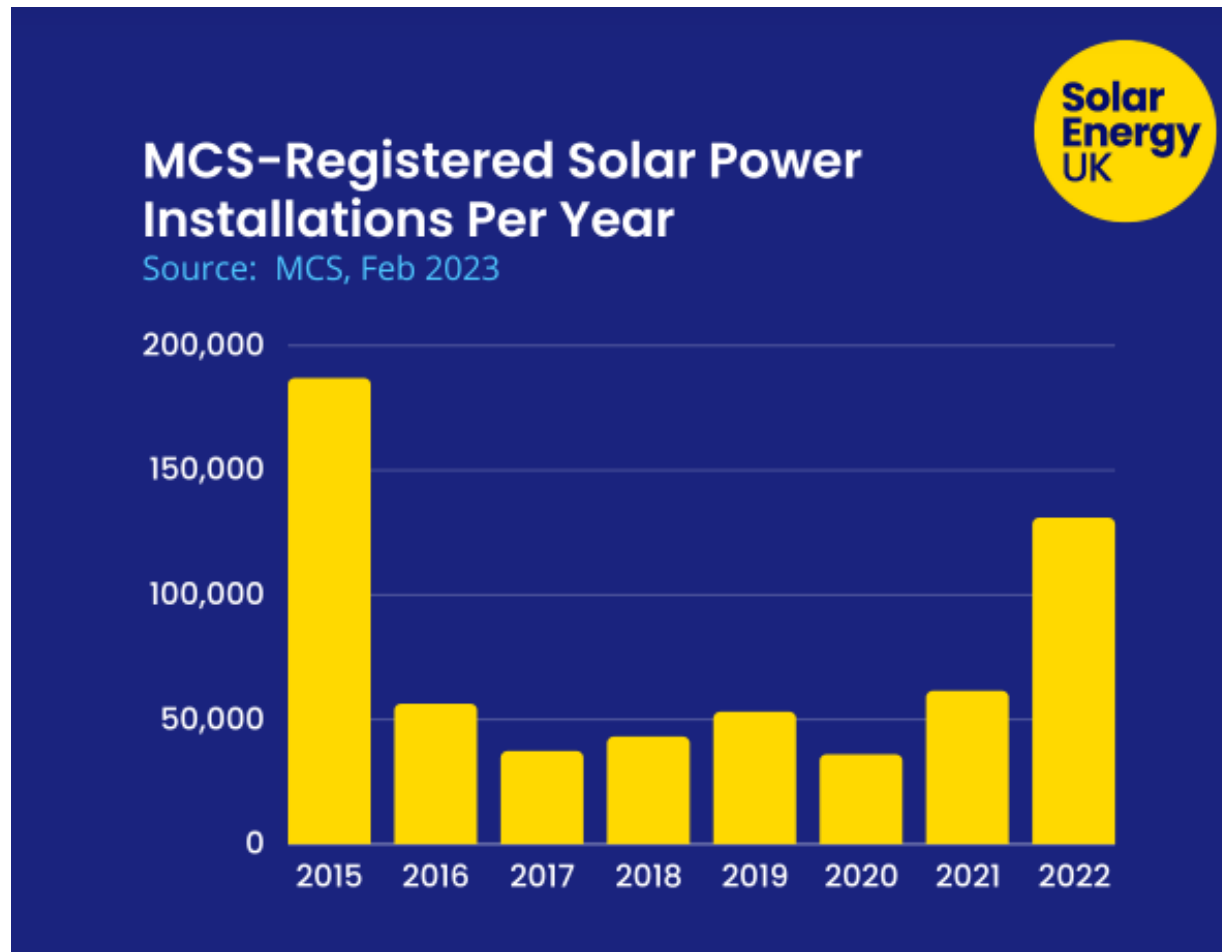
Electrification of heat and Secondary technologies

Technologies that work well in conjunction with zero emissions heating systems:

- e.g. solar thermal, solar PV and battery storage

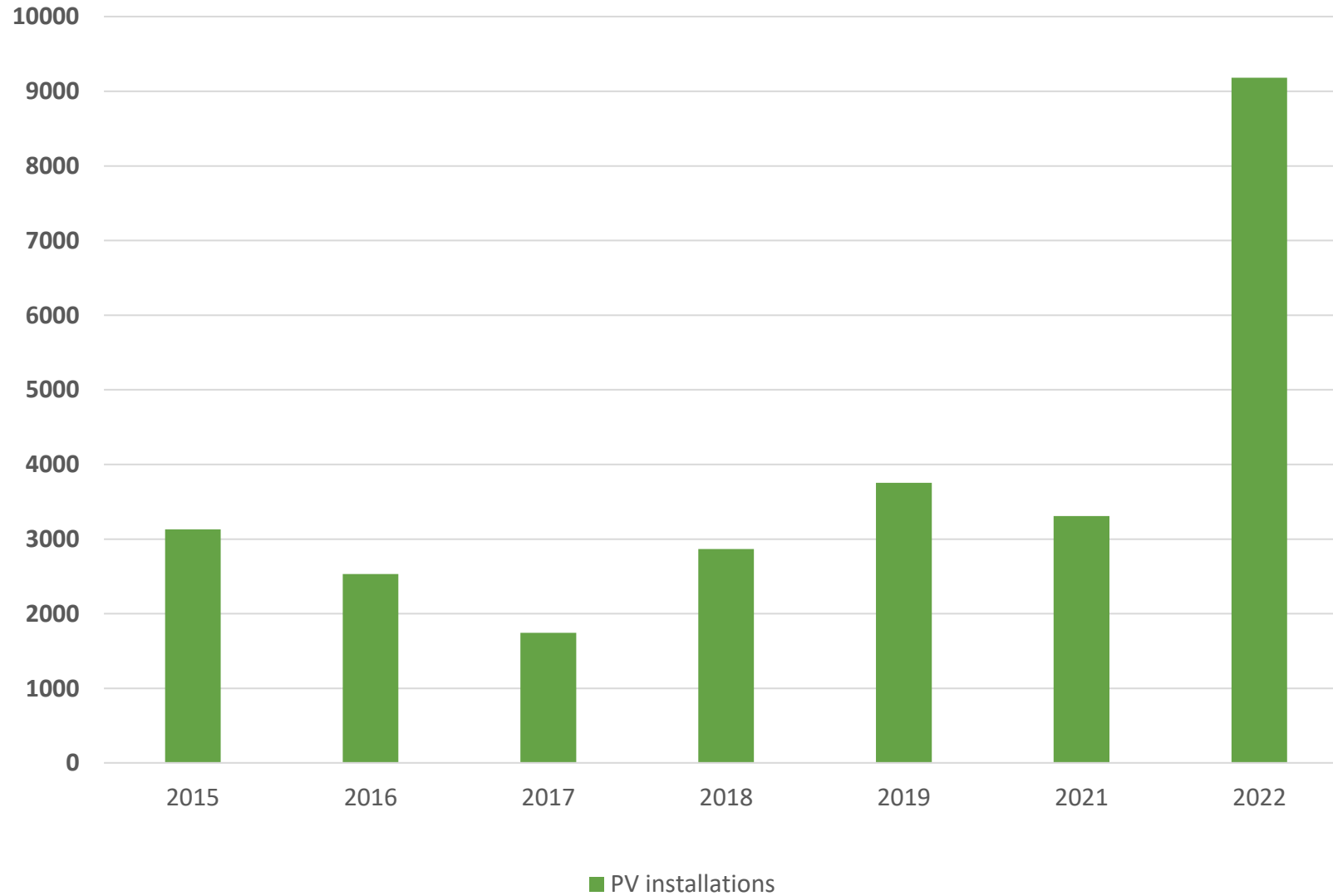
Solar thermal can supplement hot water supply and PV can contribute towards electrical demand

Rooftop PV installations in the UK



- **Dec 2015:** Major cut to Fit for small-scale installations
- **2020:** Pandemic lockdown
- **2021:** Energy price crisis begins
- **2022:** Gas prices further up due Russia invasion of Ukraine

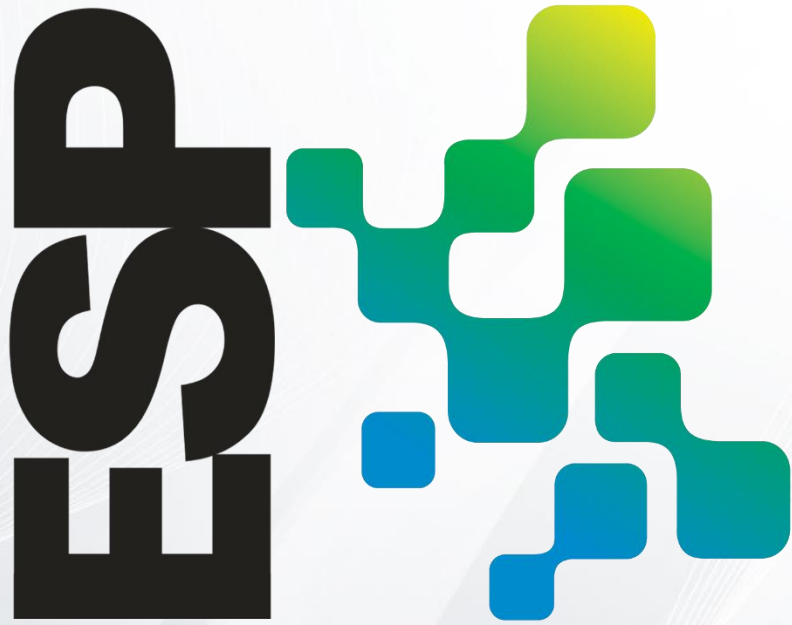
Rooftop PV installations in Scotland



Thank you for attending

- **Website:**
<https://energysavingtrust.org.uk/business/energy-efficiency/green-installer/>
- **Email updates and quarterly newsletter subscription:**
bit.ly/2PSatKL
- **LinkedIn Group:**
<https://www.linkedin.com/groups/5139242/>
- **Email:**
GreenInstallerScotland@est.org.uk





energy saving trust

Solar PV skills/quality assurance webinar



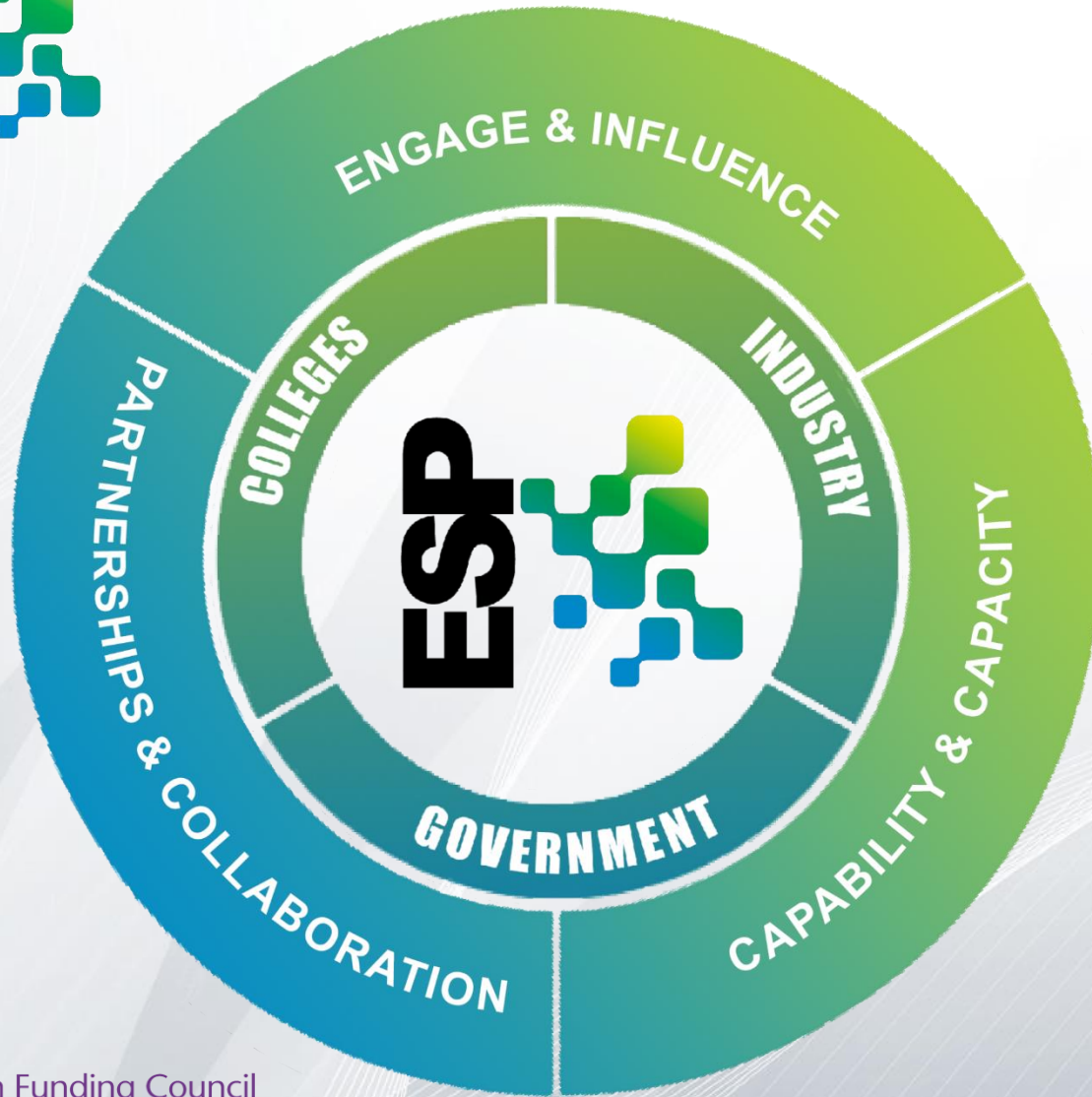
Scottish Funding Council

Promoting further and higher education

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**.



Scottish Funding Council
Promoting further and higher education

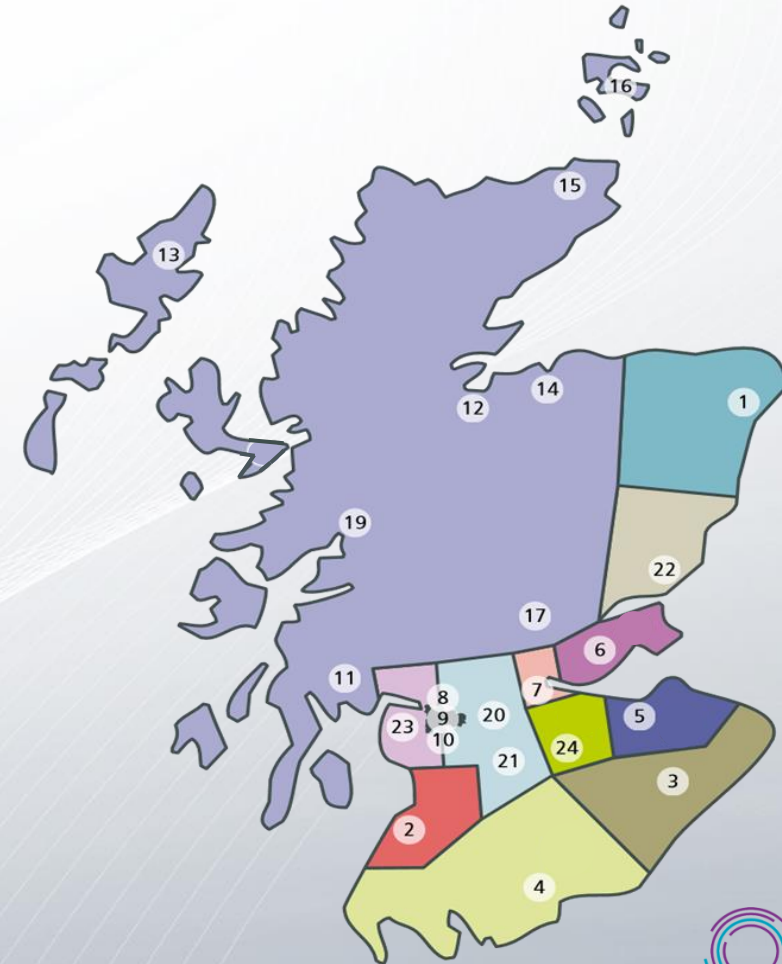
Scotland's colleges – delivering skills for the energy, engineering and construction sectors



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- UHI Argyll |
| | 12- UHI Inverness |
| | 13- UHI Outer Hebrides |
| | 14- UHI Moray |
| | 15- UHI North Highland |
| | 16- UHI Orkney |
| | 17- UHI Perth |
| | 18- UHI Shetland |
| | 19- UHI West Highland |
| 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 |



College Map

60 views

Last edit was 4 minutes ago

Add layer Share Preview

EETN Training Network

AS/GS HP 2019

Solar Photovoltaic

[Individual styles](#)

 Borders College

 Edinburgh College

 Forth Valley College

 West College Scotland

 Glasgow Clyde College - Car...



Solar PV Training Facilities



Green Heat Supply Chain

Recommended Minimum Skills and Qualifications

Transitioning our workforce



CLICK HERE >>

[Installers Skills Matrix](#)

Developed by the sector skills bodies for construction, heating and electrical, trade associations, Scottish colleges, skills agencies and other stakeholders.

[Scottish Government - The Heat in Buildings Supply Chains Delivery Plan: Towards an Industry for Green Heat](#)

Incorporated into the updated **BSI PAS 2030 (2019)** standards



Scottish Government
Riaghaltas na h-Alba
gov.scot



Comments in relation to the skills matrix please email skillsmatrix@esp-scotland.ac.uk



Route to become a Solar PV Installer

Recommended Minimum

Solar PV
Installations

Installers
MUST

Have an SVQ or
Equivalent in
Electrical Installation at
SCQF level 7

Bolt on

Requirements for
Electrical Installations
to BS 7671:2018
NOS Mapped -
Installation And
Maintenance of Small
Scale Solar
Photovoltaic Systems
(Level 3)

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

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

Competent and
Qualified Solar
PV Installer

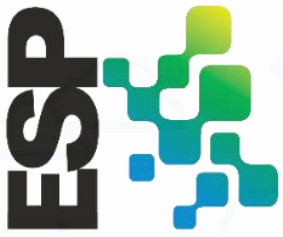
Skillsets & Qualifications

[Installers Skills Matrix](#)



Scottish Government
Riaghaltas na h-Alba
gov.scot

[The Heat in Buildings Supply Chains
Delivery Plan: Towards an Industry
for Green Heat](#)



Engage with your regional college's Business Development Advisor (BDA)

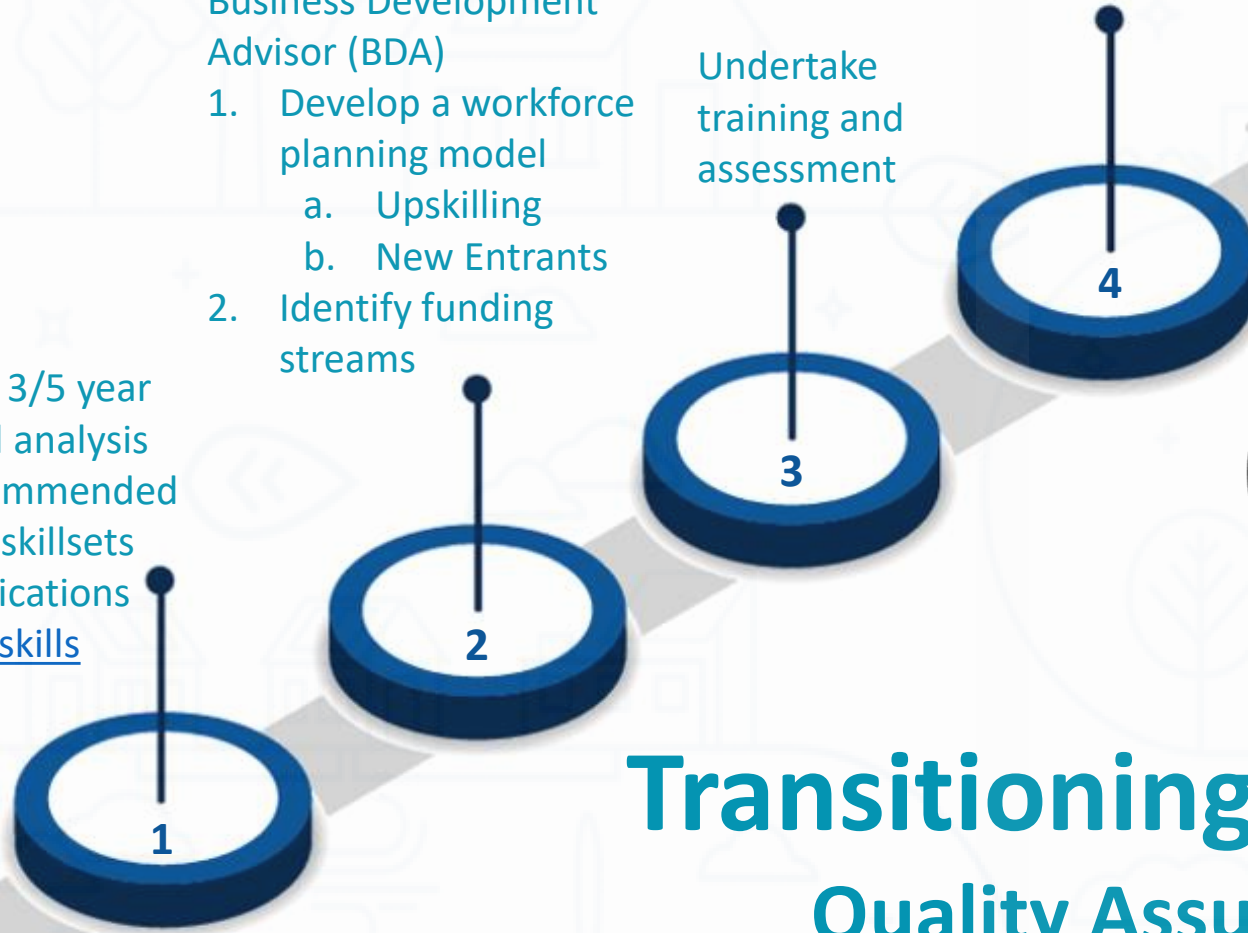
1. Develop a workforce planning model
 - a. Upskilling
 - b. New Entrants
2. Identify funding streams

Competent and qualified installer

Undertake training and assessment

“Net Zero Delivery”

Develop a 3/5 year skills need analysis using recommended minimum skillsets and qualifications [installers skills matrix](#)



“Green Heat Supply Chain”

Transitioning at Pace

Quality Assurance



Scottish Government
Riaghaltas na h-Alba
gov.scot



John Renwick
Sector Manager –
Construction



Juliet Mallace
BArch(Hons), DipArch BA
Programme Manager-
Construction



Solar PV skills webinar

ALISTAIR MCKEAN, HARRY HUNTER, QA FUNDING - GRAHAM MARTIN



This is Forth Valley College



- **Staff - 534**
- **Students – 3,200 Full Time; 14,312 headcount**
- **Largest Modern Apprentice contract – With 1,200 MAs across 383 employers**
- **1,350 School/College pupils**
- **250 Integrated Degree students**
- **Highest performing STEM College in Scotland**

This is Forth Valley College



- **UK Beacon Award winner for Innovation**
- **UK TES Awards (x3) – Shortlisted College of the Year 2020**
- **Over 91% Progress to Job or Further Study**
- **Flexible Workforce Development Funding allocated across an average of 106 employers**
- **Total income £42 million**



Our Campuses

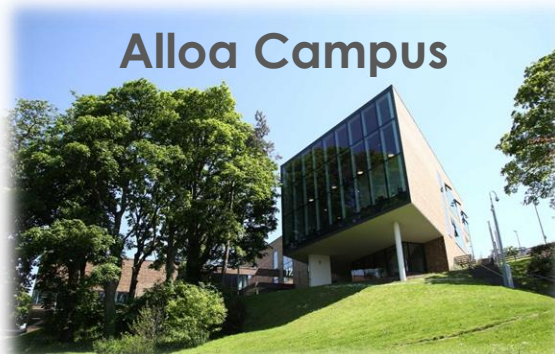


- **Total £130 Million Investment across three state of the art campuses**
- **Proud to be supporting local, national and international students**

Falkirk Campus



Alloa Campus



Stirling Campus



Our Campuses

Making Learning Work



- Bright, spacious, modern environments across all campuses providing excellent learning spaces
- Access to student support team offering pre-entry, on course and pre exit advice & guidance
- Designated space for individual and group study



Our Employer Partners

Local, National and International



Renewable and Energy Efficiency Training Centre



Future proofing the workforce

Renewables Workshop



BPEC Certificated courses include:

- Air Source and ground heat source heat pumps
- Awareness of Environmental Technologies
- Hot Water Storage Systems (Unvented)
- Solar Photovoltaic
- Solar Thermal Hot Water
- Rainwater Harvesting and Greywater Recycling
- Water Bye-Laws/Water Regulations

City & Guilds courses include:

- Electrical Vehicle Charging

The Most Available Energy on Earth



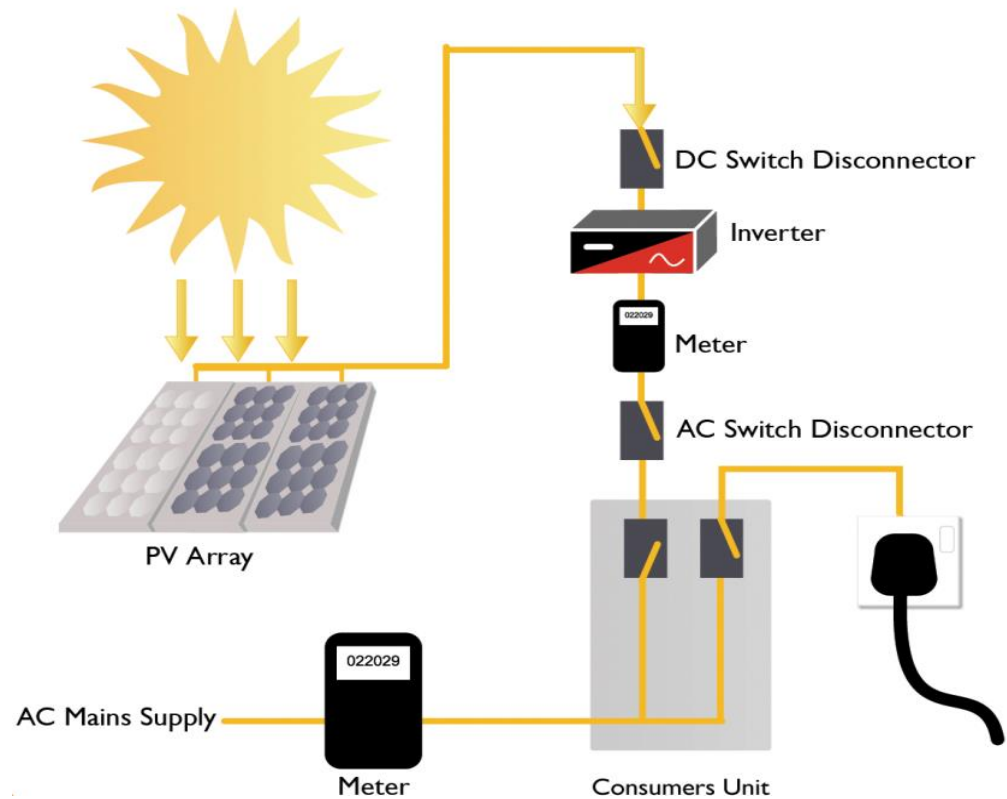
What are the Advantages of a PV System



Solar PV with Energy Storage



Solar PV Installation



Forth Valley College Energy Centre



Making Learning Work

Harry.hunter@Forthvalley.ac.uk

Panellists:

| | |
|-----------------|---|
| Pilar Rodriguez | Green Heat Installer Engagement Programme Manager, Energy Saving Trust |
| John Renwick | Sector Manager, Construction, ESP |
| Alistair McKean | Training and Business Development Manager, Forth Valley College |
| Harry Hunter | Commercial Trainer (Renewables), Forth Valley College |
| Graham Martin | Commercial Growth Officer, Forth Valley College |



Thank you for attending

- **Website:**
<https://energysavingtrust.org.uk/business/energy-efficiency/green-installer/>
- **Email updates and quarterly newsletter subscription:**
bit.ly/2PSatKL
- **LinkedIn Group:**
<https://www.linkedin.com/groups/5139242/>
- **Email:**
GreenInstallerScotland@est.org.uk

Please remember to complete the feedback survey
after the webinar has finished

