Energy efficiency barriers workshop

24 May 2016
# Programme

<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Speaker</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:40 – 10:20</td>
<td>Skills and training</td>
<td>John Renwick</td>
<td>Energy Skills Partnership</td>
</tr>
<tr>
<td>10:20 – 11:00</td>
<td>Certifications and consumer protection</td>
<td>Ian Cuthbert</td>
<td>Energy Saving Trust</td>
</tr>
<tr>
<td>11:00– 11:15</td>
<td>Tea and coffee</td>
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</tr>
<tr>
<td>11:15 – 12:05</td>
<td>Funding and procurement</td>
<td>Mark McArthur</td>
<td>Energy Saving Trust</td>
</tr>
<tr>
<td>12:05 – 12:45</td>
<td>Building regulations and planning</td>
<td>Steven Scott</td>
<td>Building Standards</td>
</tr>
<tr>
<td>12:45 – 13:00</td>
<td>AOB and next steps</td>
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<tr>
<td>13:00</td>
<td>Lunch</td>
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</table>
What is the difference between.........?

0808 808 2282
In your opinion what is the biggest barrier facing the energy efficiency industry in Scotland?

- Lack of funding for householders and landlords
- Rogue suppliers giving the industry a bad name
- Skills and training for the industry
- Other
- Procurement
- Planning
- Certification requirements
- Building regulations

Energy efficiency barriers workshop
24 May 2016
Content

• Our Role
• How we’re organised
• Construction ILG’s
• Industry & College Partnerships
• Key Priorities
• Skills Challenges
• Future Activity
• Funding Opportunities
Our Role

To establish a college sector which works collaboratively to deliver the right skills, in the right place at the right time for the Construction, Engineering and energy sector, maximising Scotland’s economic development and job creation opportunities.

Priorities

- Establish demand-led provision
- Develop capability and capacity
- Promote the Construction & Engineering sector as a career of choice
- Develop qualification pathways schools → college → university
- Interface with government, government agencies and industry bodies
- Play a key role in economic development and job creation
- Influence and support energy developments across Scotland’s colleges
How We’re Organised

Engineering and Energy
- Engineering
- Power
- Onshore and Offshore Wind
- Wave and Tidal
- Generation
- Grid
- Oil and Gas
- Upstream
- Downstream
- Carbon Capture and Storage

Construction and Energy
- Construction
- Micro Renewables
- Energy Efficiency
- Building Information Modelling

Emerging Technologies
- Low Carbon Transport
- Zero Waste
- Circular Economy
- Resource Efficiency
- Resource Management
- Advanced Manufacturing
- Hydrogen
- Energy Storage

Steering Group

Industry Involvement
Industry & College Partnerships

- Meeting industry’s needs  
- Building up Capacity & Capability
- Sharing staff expertise
- Upskilling staff CPD
- Access to pre-apprenticeship programmes
- Curriculum design to meet your needs
- Investment in Equipment & Material
- Funding

[Video Link]
Meeting Industry’s needs!

- ASHP/GSHP & Solar Thermal pipeline to meet RHI
- Scottish and Northern Ireland Plumbing Employers Federation (SNIPEF)
- Upskilling 120 Existing Modern Apprentices
- Industry commitment, £144k
- 9 Regional College’s, £72k
- Skills Development Scotland, £72k
- Total Funding- £288,000.00
Engineering, Construction & Energy Key Priorities

Developing Capability and Capacity

• Industry Train the Trainer to meet industry’s demand
• Industrial placements
• Guest lecturers
• Secondments
• Lecturers of the future
• Industry Led staff CPD

Teaching and physical resources

• Identify and integrate new courses, Circular Economy, Air Tightness etc
• Develop new programmes & teaching materials
• Implement curriculum change
• Modern methods of construction
• Thermal imaging & acoustics
Phase 1 Priorities

- Waste
- Environmental Awareness
- Air Tightness
- EWI & IWI
- Offsite Manufacturing
- Passivehause
- Emergent Technologies
- Thermal Imaging
- Battery Storage
- Building Information Modelling

Respond to Industry’s needs

Air Tightness

Phase 2

- Industry Intro course
- L1 BSRIA Certificated

Energy Efficiency Priorities

Phase 1 Priorities

- Train the Trainer Programmes
- Staff CPD
- Industry Experience
- Guest Lecturers
- Learning materials
- Capital Equipment

Impact to FT, MA’s & Industry

Air tightness Kit
Skills Challenges in the Energy Sector

Key Findings  UK Commission for Employment and Skills (UKCES)

- Energy sector contributed 3.3 per cent of the UK’s Gross Domestic Profit (GDP)
- 6.2 per cent of the industrial workforce was employed equating to 169,000 people
- Key drivers of employment, policy, new technologies, transition to a low carbon economy
- Poor visibility of (and consequently interest in) the energy sector as a career prospect among young people and potential new entrants
- Ageing workforce
- Qualifications need to keep up with industry’s needs
- Collaboration between academia & industry so that qualifications are tailored closely to meet employers needs
- The cost of upskilling a changing sector
- Attracting skilled workers to remote locations
### Skills & Knowledge Needs (Pye Tait)

<table>
<thead>
<tr>
<th>Technical skills needs</th>
<th>Technical knowledge needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Installation of solar thermal and photovoltaic (PV)</td>
<td>Legislation and targets relating to energy efficiency (as it continues to emerge) and what this means for the built environment sector; awareness of energy consumption</td>
</tr>
<tr>
<td>Installation of energy recovery/efficient cooling/shallow geothermal systems</td>
<td>Awareness of building regulations and how they will continue to evolve over time</td>
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<tr>
<td>Installation of biomass, combined heat and power &amp; wind turbines</td>
<td>Understanding of the principles of heat loss, heat gain and moisture movement</td>
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<td>Installation of ground and air source heat pumps</td>
<td>Understanding of and skills in relation to offsite manufacturing</td>
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<tr>
<td>Installation of solid wall and cavity wall insulation, and building fabrics they are suitable for</td>
<td>Understanding air quality, air tightness and ventilation requirements of buildings (including the implications of “getting it wrong” in relation to air tightness in particular)</td>
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<td>Installation of switches and thermostats</td>
<td>Knowledge of the range of energy efficiency measures, and their suitability for different building fabrics and ages, including pre-1919 and hard to treat buildings</td>
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<tr>
<td>Ability to use geotechnical measurement equipment and carbon assessment tools</td>
<td>The so-called ‘hierarchy’ of energy efficiency measures, i.e. the sequence in which issues in buildings must be addressed to ensure maximum energy efficiency</td>
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<tr>
<td>Ability to work with more precise tolerances and a greater degree of technical accuracy</td>
<td>Knowledge of a range of different types of insulation treatments and their suitability for various buildings including thermal insulation</td>
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<td>Skills in Building Information Modelling (BIM)¹⁰¹</td>
<td>Understanding of building physics and how different energy efficiency measures will impact on other installations (current and future) within a building, and the structural implications (for example air tightness) of implementing changes</td>
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<tr>
<td>Ability to install different energy efficiency systems having identified which best suits the needs of a range of buildings (age and fabric)</td>
<td>Knowledge of different types of low carbon materials – including the design lifecycle</td>
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### Other skills and knowledge needs

- Communication and sales skills – notably the ability to explain financial mechanisms such as the Green Deal and to translate technical jargon
- Administrative skills
- Understanding of occupational remits/impacts e.g. an electrician installing solar panels on a roof and how this might affect the infrastructure – elements of multi-skilling possibly needed; also need to consider impact/contribution of water and waste management, and recyclable materials
- Leadership and management skills
- STEM (science, technology, engineering and mathematics) skills.
## General Strategy & Key Objectives – Summary

<table>
<thead>
<tr>
<th>Key Actors</th>
<th>SScs</th>
<th>Governments &amp; their Agencies</th>
<th>Employers</th>
<th>Training Providers (FE, HE, Private)</th>
<th>Awarding Organisations</th>
<th>Trade Unions/Federations/Associations</th>
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### Out of scope – associated actions

- Seek to embed the green agenda fully by seeking cultural and behavioural change.
- Seek to influence Government so that their energy efficiency policies and legislation offer reassurance of longevity to the sector.
- Raise awareness & understanding/stimulate demand for energy efficiency measures among consumers and employers.
- Address barriers to training that exist in the UK energy efficiency skills infrastructure.

### Key Objectives

- Establish and maintain appropriate quality assurance underpinned by appropriate accreditation.
- Address skills gaps and embed solutions into existing qualifications and frameworks.

### Embed energy efficiency knowledge into existing qualifications and frameworks.

<table>
<thead>
<tr>
<th>Short-Term</th>
<th>Medium-Term</th>
<th>Long-Term</th>
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<tbody>
<tr>
<td>2013</td>
<td>2014</td>
<td>2015</td>
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<td>2016</td>
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<td>2018</td>
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<tr>
<td></td>
<td></td>
<td>2019</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2020</td>
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</tbody>
</table>

**= Core responsibility, o = Can influence**
Upskilling College Staff to meet industry’s needs
Construction Funding Opportunities
Low Carbon Skills Fund

The Low Carbon Skills Fund, from Skills Development Scotland, enables employers to access up to £5,000 worth of funding to undertake training and to support sustainable development and growth.

The fund gives any Scottish business with fewer than 100 employees the opportunity to apply for up to £5000 towards employee training costs in areas such as renewable energy and low-carbon technologies, energy efficiency, waste management and reuse, and reducing carbon in supply and energy management.

Benefit to your business:

• learning and training to improve resource and energy efficiency
• adopt innovative technologies or new sustainable practices and processes and identify new market opportunities
• PR benefits from green credentials
Up to £5,000 towards training with Low Carbon Skills Fund

- Reduced costs
- Increased profits
- Innovative new processes
- Green credentials
- Improved energy efficiency
- For businesses with fewer than 100 staff
Standard Innovation Vouchers
Up to £5,000 of funding aimed at encouraging new business and academic partnerships to drive innovation, leading to new products, services or processes that will benefit the company, university, research institution or further education college and the Scottish economy.
£7.5 million Construction Innovation Centre established in Scotland to connect industry and academia.

Innovation support to industry in order to deliver a shift in the in transformational change.

- Project proposals must be led by industry
- Fund academic expertise element up to 40% total project cost
- Company contribution can be in kind
- Typically fund projects from £20k - £200k
energy skills partnership
powering the future

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Certifications and consumer protection

Ian Cuthbert
Energy Saving Trust
Bonfield Review

- Initiated by Energy Minister Amber Rudd who wrote to Peter Bonfield, CEO BRE.
- Bonfield now chairs Independent Review of Consumer Advice, Protection, Standards and Enforcement.
- Review does not cover new build or building regulations.
- Final report with recommendations expected soon (originally expected March 2016).
Bonfield Review themes for industry

• Signing up to a comprehensive Consumer Charter.
• Undertaking installations or assessments in accordance with defined Codes of Practice.
• A Quality Mark for the domestic retrofit sector.
• Providing agreed standards for advice.
• A simplified, single redress process for the industry sector.
• A stronger more consistent level of core competency training.
• A robust, consistent and efficient quality assurance framework.
Future of PAS 2030

- PAS 2030 will be updated this year in time for ECO 3.
- More recognition of the importance of design.
- Flexibility for incorporating new measures.
- Include guidance on how to treat corners, junction edges and interfaces including the interface between building and occupants.
- Guidance on thermal bridging, air tightness and moisture movement.
- The National Standards Authority of Ireland (NSAI) guide is seen as a good example (right).
NSAI S.R. 54: 2014

Figure 21 - Eaves ventilation showing use of vent tiles

Figure 54 - Typical wet render system

www.standards.ie/cgi-bin/news/ie/NEW276
Green Deal Advice Reports

- GDARs still a requirement of HEEPS schemes
- 90,001 GDARs to date in Scotland (up to 3 May 2016)
- 1,689 GD Advisors registered on EPC Scotland Register (up to 3 May 2016)

<table>
<thead>
<tr>
<th>Period</th>
<th>GD Advisors</th>
<th>GDARs*</th>
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</thead>
<tbody>
<tr>
<td>1 Feb – 3 May 2016</td>
<td>44</td>
<td>8,471</td>
</tr>
<tr>
<td>2 Feb – 5 May 2015</td>
<td>87</td>
<td>11,325</td>
</tr>
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</table>

*Comparison of GDAR and advisor figures over similar periods.
Source EPC Register Scotland.*
Consumer protection
How can we protect consumers from....?

- Nuisance calls.
- High pressure sales.
- Companies claiming to be government backed.
- False claims of government funding.
- Providing false or misleading information.
- Poor quality installations and assessments.
- Installer going out of business before a fault is identified.
Consumer advice and information

For complaints about nuisance calls
The Information Commissioners Office (ICO) - 0303 123 1113.

For complaints about a company (with referrals to Trading Standards)
Citizens Advice Consumer Helpline - 03454 04 05 06.

For information about EE schemes and for impartial advice
Home Energy Scotland – 0808 808 2282
Discussion

1. What are the major challenges facing businesses in relation to certifications and consumer protection?

2. Does industry agree with the Bonfield Review’s recommendations in relation to standards? If not, why not?

3. What should be done in Scotland to help ensure Scottish householders are protected? What role does industry have to play in this?
Finance and procurement

Mark McArthur
Energy Saving Trust
Energy Companies Obligation

- Obligation on energy companies to facilitate energy efficiency improvements and heating cost reductions in GB.
- Second phase finishes on 31st March 2017.
- Funding managed by third parties/contractors or directly by social housing providers, with some directly by energy suppliers.
- Split into three sub-obligations:
  - Carbon Emissions Reduction Obligation (CERO).
  - Carbon Saving Communities Obligation (CSCO).
  - Home Heating Cost Reduction Obligation (HHCRO).
Future of the energy supplier obligation

• Supplier obligation framework set to be in place until 2022.
• New fuel poverty based obligation set to be introduced for GB from April 2018.
• Separate regulations likely to be set in Scotland from April 2018, as per Smith Commission recommendations.
• Consultation on a transitional ECO phase 2017/18 due to be published soon by DECC.
• Consultation on probable Scottish regulations post April 2018, would be issued by the Scottish Government at a later date.
• Value of the future obligations will be lower than at present.
Future of the energy supplier obligation

- Scotland will get a fixed share of the value of the obligation if it implements its own regulations post March 2018.
- Future supplier guidance will be set in light of recommendations of the Bonfield review.
- New version of PAS:2030 to be introduced.
- Legislation on interim obligation likely to be laid before the UK parliament in the winter of 2016/17.
Scotland’s Energy Efficiency Programme (SEEP)

- Announced 9th of June 2015.
- Over a 15-20 year period make an offer to buildings, domestic and non domestic to improve energy efficiency.
- Multi year funding for programmes.
- Continued support for individuals who are fuel poor but also support loan schemes.
- Development of relevant powers devolved through the Scotland Bill.
- New programmes launched from 2018 and pilots from 2016.
SEEP

- Bids submitted in early 2016 to a £14 million pathfinder fund for projects that will deliver by 31 December 2017, funded through:
  - Low Carbon Infrastructure Transition Programme (LCITP) (£4 million)
- Pilots will inform the design of future programmes.
- Projects may include:
  - Extension of existing energy efficiency measures, including insulation, renewables and supply initiatives
  - Mixed tenure and use approaches.
LCITP

Low Carbon Infrastructure Transition Programme (LCITP)

• Supporting the transition to a low carbon economy.
• Measures generally affecting non-domestic properties.
• Provides a range of support mechanisms including project development, expert advice and funding (where applicable) to support the development of substantive private, public and community low-carbon projects across Scotland.
HEEPS

Home Energy Efficiency Programmes for Scotland (HEEPS)

- HEEPS: area based scheme (HEEPS:abs)
- HEEPS: loans
- HEEPS: Warmer Homes Scotland
Home Energy Efficiency Programmes for Scotland: area based scheme (HEEPS:abs)

• Funded by Scottish Government since April 2013- and continuing to 2016/17.
• Aim to tackle fuel poverty in private sector properties.
• Managed by local authorities.
• £40 million funding allocated to LAs based on assessed need and £10 million allocated to SEEP pilot bids in 2016.
• Cap of £6.5-7.5K on grant per property, dependent on house type.
• Very remote rural cap of £9K per property.
• Backed by interest free HEEPS:abs loan scheme.
HEEPS: abs

- Requirement to match fund with Energy Company Obligation (ECO) funding.
- Usually HTT cavity wall and solid wall measures supported, although some funding for standard cavities and lofts.
- Two main types of project:
  - Centred on social housing projects with rates extended to neighbouring private sector properties.
  - Private sector schemes with few social housing properties involved.
HEEPS: abs qualification

LAs use proxies for fuel poverty for targeting schemes, such as:

• Living in A to C Council Tax banded properties and D banded properties with E, F or G EPC ratings.

• Targeting areas with high numbers of households meeting fuel poverty vulnerability criteria (disability, age, children).

• Possible HHCRO related targeting as agreed by LAs with the Scottish Government.

LAs have to demonstrate that energy efficiency schemes fit within strategic approaches, such as alongside regeneration initiatives.
Warmer Homes Scotland

• Scheme covers a wide range of insulation heating and renewable measures for households at risk of fuel poverty.
• Managing agent Warmworks appointed and scheme in 2015.
• Qualification criteria based on vulnerability benefit and tax credit status and energy efficiency of the property.
• Supply chain evolving in line with requirements of the scheme.
Scottish Government loan schemes

HEEPS: loan scheme, providing interest free loans for private sector households repayable over up to ten years:

• Up to £15K for energy efficiency measures including up £10K for solid wall insulation and £5K for heating measures.
• Gas infill loan of between £500 and £5,000 for gas heating installation and gas connection costs.
• Private sector landlords can receive up to £15K per property to a maximum of £100K for multiple properties.

RSL loan scheme- interest free loans of up to £1 million per RSL to assist them delivering against EESSH targets- launching shortly, repayable over ten years.
HEEPS: abs/SEEP procurement

- Procurement notices usually posted on Public Contracts Scotland site and can include:
  o Social housing programmes.
  o HEEPS: abs schemes targeted predominantly at private sector properties.
- Some procurement for frameworks utilised, by LAs.
- Some energy supplier managed schemes.
- Sub-contracting opportunities particularly where the main contractor has limited local presence.
- Local economic benefits clauses sometimes apply to contracts leading to local sub-contract opportunities.
Requirements often included in procurement

- PAS:2030, Green Deal and manufacturer accreditation.
- Ability to carry out Energy Performance Certificates and Green Deal advice reports.
- Past experience of installing and reporting to LAs and energy suppliers.
- Understanding of how referral processes and liaison with Home Energy Scotland advice centres and the LA could work.
- Understanding of fuel poverty issues and support schemes.
- Customer care policies.
- Environmental practices.
- Lead generation experience and mixed tenure approaches.
HEEPS/SEEP 2016-18 procurement

• Procurement for HEEPS:abs and SEEP projects continuing in 2016
• Information on tenders and awarded contracts often on Public Contracts Scotland.
• For opportunities through energy supplier managed schemes - contact ECO managers listed on Ofgem website.

https://www.ofgem.gov.uk/publications-and-updates/supplier-contact-details
## Energy efficiency contracts in PCS

<table>
<thead>
<tr>
<th>Product category</th>
<th>Sub-category</th>
<th>Number of suppliers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilities and Management Services</td>
<td>Energy Efficiency</td>
<td>647</td>
</tr>
<tr>
<td>Consultancy</td>
<td>Efficiency Consulting</td>
<td>817</td>
</tr>
<tr>
<td>All Categories in PCS</td>
<td>-</td>
<td>17,356</td>
</tr>
</tbody>
</table>

*Note – some energy efficiency contracts may also appear in other categories including ‘special projects’*

[Public Contracts Scotland website](#)
Procurement guide for suppliers

- Public Procurement Regulations
- How to manage the tender process
- How to find opportunities
- Bid strategy
- Prequalification
- Responding to the ITT – writing your bid
- What to do if you are unsuccessful
- Includes exercises and templates
- www.energysavingtrust.org.uk/procurement-guide
Discussion

1. How could take up of the HEEPS: loans be improved? Could there be better models for supply chain participation e.g. approved framework of contractors?

2. How can suppliers get better access to government schemes? Can procurement processes be improved?

3. Do suppliers have any thoughts on Scottish ECO post Smith Commission that could help inform the Scottish Government’s consultation?
Procurement workshops

7 June – Salutation Hotel, Perth.
8 June – Energy Centre, Dumfries and Galloway College, Dumfries.
Statutory permissions and regulations

Steven Scott
Building Standards
What applies?

- Planning Permission / Listed Building Consent
- Building Regulations / building warrant
- Other?
Discussion

When issues arise - what are they and how are they resolved?

1. The process – time needed to get permission?

2. Application of requirements – differing interpretation / conflicting requirements?

3. Information/skills – understanding what needs to be done?

4. Other?