

Consultation on Scottish skills requirements for energy efficiency, zero emissions and low carbon heating systems, microgeneration and heat networks for homes.

Partial Business and Regulatory Impact Assessment

Title of Proposal

Supply chain skill requirements for the Heat in Buildings Programme.

Purpose and intended effect

To ensure the success of the Heat in Buildings Programme, Scottish Ministers are proposing to incorporate minimum skill requirements for suppliers wishing to participate in the programme. We are proposing that:

- The installer skills matrix developed by the sector skills bodies, industry and other key stakeholders in Scotland are adopted and fully integrated into the British Standards Institution (BSI) Publically Available Specification (PAS) 2030 installer standards and Microgeneration Certification Scheme (MCS) installer standards to reflect Scotland's skills needs.
- We will work with skills agencies including the Scottish Qualifications Authority (SQA) and Skills Development Scotland (SDS) to consider the need for qualifications and/or further training in Scotland for the other roles featured in PAS 2035 wider retrofit standards where no qualifications currently exist in Scotland.

Background

Heat in Buildings

Our Heat in Buildings Programme¹ is the primary vehicle for reducing energy demand and carbon emissions from Scotland's existing buildings, and for eliminating poor energy efficiency as a driver of fuel poverty. Delivering on our targets for energy efficiency has the potential to support substantial employment opportunities and build Scotland's supply chain. It has been estimated that this will require investment of £10 billion over its lifetime and that every £100 million spent on energy efficiency improvements supports approximately 1,200 fulltime equivalent jobs² across the Scottish economy

In March 2019, the independent Quality Assurance Short Life Working Group published a [report](#) with 19 recommendations for developing quality assurance for Energy Efficient Scotland (including heat) which included a number of recommendations in relation to 'building the workforce' including a recommendation that all installations under Energy Efficient Scotland must be

¹ Previously referred to as the Energy Efficient Scotland Programme.

² Type 1 construction sector employment effects multiplier from the [Scottish Government input-output tables](#), applied to 2021 prices.

based on skill and competencies, and a skills and qualifications matrix should be developed and clearly communicated to the supply chain to reflect this. This skills matrix was subsequently produced through an industry working group that included all the sector skills bodies for construction, heating and electrical, trade bodies, a number of Scottish colleges, key delivery partners of the Scottish Government including Warmworks, Skills Development Scotland and Historic Environment Scotland.

This skills matrix outlines the recommended minimum qualifications, with recognition of Recognised Prior Learning (RPL)³, for the various trades (e.g. plumbers/heating engineers) broken down by measure (e.g. air source heat pumps). It also includes requirements for those inspecting the work. This skills matrix is expected to form a key part of our broader Climate Emergency Skills Action Plan

UK retrofit standards

In June 2019, the British Standards Institution (BSI) published a new retrofit standard for energy efficiency known as the Publicly Available Specification (PAS) 2035. This standard covers the entire retrofit process, from initial assessment and design to installation and evaluation. It incorporates the updated PAS 2030: 2019 installer standard, which was initially developed to support the Green Deal. Together they are known as PAS 2035/30: 2019.

These standards incorporate a number of well-defined roles for retrofit work including: retrofit coordinator, assessor, designer, installer and evaluator. Competency requirements are also listed for these.

For renewables, industry standards have been available for sometime and continue to evolve. These standards are provided by the Microgeneration Certification Scheme (MCS) and are separate to the BSI PAS 2035/30 standards.

Objective

Scottish Ministers want to ensure skills are at the heart of quality assurance for householders and businesses participating in the Heat in Buildings Programme. Furthermore, our refreshed skills strategy makes clear the government's commitment to skills and training to help address Scotland's skills needs and improve economic performance. This is particularly true for energy efficiency and low carbon heat. To achieve this we propose the following:

- The installer skills matrix developed by the sector skills bodies, industry and other key stakeholders in Scotland are adopted and fully integrated into the British Standards Institution (BSI) Publicly Available Specification (PAS) 2030 installer standards and Microgeneration Certification Scheme (MCS)

³ RPL is a method of assessing whether a learner's experience and achievements meet the evidence requirements of a recognised training unit which may or may not have been developed through a course of learning.

installer standards to reflect Scotland's skills needs.

- To adopt the BSI retrofit standards for Scotland and the associated skills and competency requirements for other retrofit roles where we will work with skills agencies including the Scottish Qualifications Authority (SQA) and Skills Development Scotland (SDS) to consider the need for qualifications and/or further training in Scotland for these roles particularly where no qualifications currently exist in Scotland.

We acknowledge that there will be a number of installers currently operating in the market who may not have the formal qualifications for their operatives as set out in the skills matrix and there may be some concerns about this. To address this we propose the following:

- The skills matrix to feature as an annex or similar in both the PAS 2030 and MCS standards which will show routes to competence in compliance with the current standards. Therefore, there is no change to the fundamentals of these standards for the time being.
- We expect the skill requirements to become mandatory at some point within these standards, the timings of which will be included in our public consultation for feedback.

It should also be emphasised again that RPL is a route to achieving these competencies and depending on the current skills set of the operative, this route could be less expensive and time consuming compared with a full training course to achieve the necessary qualification. This is something local colleges can support installers with and we plan to work with them to develop pathways to support installers and other suppliers to achieve this.

However, we would welcome feedback as part of the consultation on the proposed routes to upskilling existing Installers where we can identify any barriers to entry for existing Installers.

We would also encourage suppliers to take advantage of the various skills funding announced in our Programme for Government so there is an excellent opportunity to achieve the skills requirements before they become mandatory. This funding will be reviewed to ensure specific skill gaps are supported.

Finally, the establishment of these skill requirements will also contribute greatly to both the capacity and capability of Scottish colleges by establishing the need for these skills which in turn will help deliver on the skills funding announcements mentioned in the Programme for Government.

Adopting the minimum skill requirements for the Heat in Buildings Programme is just the beginning as it is intended that skills, standards and quality more widely will be increased as the programme develops.

Rationale for Government intervention

The proposals for minimum skill requirements sit very well with the National Performance Framework as follows:

- **Create a more successful country**
A highly skilled work force for energy efficiency and heat not only brings benefits to markets in Scotland but potentially further afield. If Scotland is seen as a leading country for energy retrofit and skills then there could be wider economic benefits including markets in other countries.
- **Increase the wellbeing of people living in Scotland**
There are direct and indirect benefits of energy efficiency and heat skills in Scotland. Assuming there is a buoyant market for energy efficiency and heat then there is a direct benefit for jobs, particularly school leavers where there will be a well-established pathway for them to gain the skills to work in this sector. The indirect benefits are through the work that is carried out by the skilled operatives to ensure retrofit work is done to a high quality resulting in lower fuel bills and improved comfort in homes which is widely acknowledged to provide health benefits for the recipients particularly the vulnerable and elderly.
- **Create sustainable and inclusive growth**
This links closely to the points above but with the added edition that having set the minimum skill requirements then this will contribute to inclusive growth by ensuring training provision is available across Scotland including the islands. There is still a lot of work to be done to achieve this but this cannot work effectively until these requirements have been set. This also relates to the aim of **giving opportunities to all people living in Scotland**.
- **Reduce inequalities and give equal importance to economic, environmental and social progress**
The economic and environmental benefits are fairly well established but we will also aim to reduce inequalities by working with colleagues in construction and skills to ensure underrepresented groups are encouraged to work in this sector.

Consultation

Within Government

We have consulted internally on these proposals which involved colleagues from:

- Directorate for Energy and Climate Change
- Directorate for Fair Work, Employability and Skills
- Directorate for Housing and Social Justice
- Directorate for Economic Development

Quality Assurance Short Life Working Group

In order to ensure that quality assurance under Energy Efficient Scotland reflects the needs and views of the Scottish supply chain, Scottish Ministers agreed to convene a Short Life Working Group (SLWG) to focus on the quality, skills, supply chain and consumer protection requirements of the Programme. This group met

for the first time in January 2018 and held five meetings with the last being held in December 2018. The SLWG membership was as follows:

- Citizens Advice Scotland
- Construction Scotland
- Energy Saving Trust (chair)
- Energy Skills Partnership
- Highlands and Islands Enterprise
- Historic Environment Scotland
- Skills Development Scotland
- Scottish Enterprise
- Scotland Excel
- The University of Edinburgh (ClimateXChange)
- Warmworks Scotland LLP

Following the publication of the SLWG report with recommendations, a new working group was set up to look at qualifications and skills (Quality and Skills Working Group). The Energy Skills Partnership provided the secretariat for this and the group's aim was to map Energy Efficient Scotland requirements against existing National Occupational Standards and to develop minimum skill requirements for the Energy Efficient Scotland programme. The group also wanted to ensure that Scotland's colleges are central to any training.

Public Consultation

In March 2019 we published the Energy Efficient Scotland consultation which included a chapter on the supply chain where we consulted on the 19 recommendations from the Quality Assurance Short Life Working Group. We subsequently published our [consultation analysis](#) in December 2019 and among respondents who commented on the skills recommendation remarks, it was argued that the competencies required to install energy efficiency measures are already specified in the National Occupational Standard which forms the basis of vocational qualifications such as 'Insulation and Building Treatments'. Other qualifications, such as the Award in Energy Efficiency Measures for Older and Traditional Buildings should also be used to augment knowledge.

To give confidence, it was proposed that a separate independent organisation should carry out assessments or that consideration should be given to how the role of assessor and installer are separated to avoid the potential for mis-selling. Recognition of the importance of training in acceptable selling activities and in contractual issues was also seen as important.

With respect to the proposed skills and qualifications matrix, it was suggested that this should be developed in collaboration with industry and may vary depending on the energy efficiency measures being installed.

We acted on this feedback by working with industry to develop a skills and qualifications matrix that pulled together all the existing qualifications into a single

document. In addition to give confidence about any conflicts of interest between assessor and installer, we are proposing to introduce the new retrofit coordinator role in accordance with the PAS 2035 standards.

We continued to consult stakeholders on the skills recommendation and details of these are outlined in the 'Business' section below. In addition, initial discussions have been held with representatives from both BSI and MCS to discuss integrating Scottish skill needs into their respective standards. Both BSI and MCS were very positive to the idea

A full public consultation to seek wider views on the skill requirements for Heat in Buildings will be launched in February 2021, and will run for a 12 week period. To support this consultation we plan to hold a virtual workshop for Scottish suppliers and other stakeholders and another virtual workshop focusing on remote rural and island suppliers which would be promoted through various channels including suppliers registered with the Sustainable Energy Supply Chain programme administered on our behalf by Energy Saving Trust.

Business

The Quality and Skills Working Group administered by Energy Skills Partnership had representatives from the following organisations with many of them representing their respective industry. Some of the trade bodies also consulted with their members on this, for example the electrical trade body SELECT.

- BESA (Building Engineering Services Association)
- BRE (Building Research Establishment)
- CITB (Construction Industry Training Board)
- Energy Saving Trust
- EU Skills
- FMB (Federation of Master Builders)
- HES (Historic Environment Scotland)
- INCA (Insulated Render and Cladding Association)
- NIA (National Insulation Association)
- NICEIC (National Inspection Council for Electrical Installation Contracting)
- SDS (Skills Development Scotland)
- SELECT – sector skills body for electricians
- SNIPEF (Scottish and Northern Ireland Plumbing Employers Federation)
- South Lanarkshire College
- Warmworks
- West College Scotland

Options

Below are the key options identified for EES skill requirements.

Option 1 – do nothing

If nothing is done then the energy efficiency and renewables industry will lack clarity on what qualifications and skills they require to carry out retrofit work in

Scotland. Currently the BSI installer standards (PAS 2030) are not specific on the qualifications and skill requirements as they simply state that “installers need to hold a regulated and industry agreed, vocational qualification of apprenticeship”. This will also have an impact on college courses given the ambiguity of the skill requirements for the standards which may be interpreted differently and lead to inconsistencies. Furthermore this will have an impact on our ability to effectively use the skills funding announced in our Programme for Government. Above all, doing nothing could lead to consumer detriment if the individual operatives doing the work are not sufficiently skilled.

Option 2 – incorporate the skills matrix developed by ESP into UK standards

By incorporating the skills matrix developed by ESP and industry into the UK standards (BSI PAS 2035/30 and MCS) then there will be much greater clarification on the skill requirements for installers. Coupled with Scottish college course provision and skills funding, this should significantly help with upskilling for energy efficiency and renewables in Scotland and help grow both the capability and capacity of the supply chain in Scotland.

For example a website could be developed with the UK-standards linking to this in terms of Scottish skill requirements. Users going to this site will also be able to access details on skills funding and college courses available to satisfy their skill requirements.

Above all this is something industry is calling for particularly as the Qualifications and Skills Working Group included all the key sector skills bodies (the BESA, SNIPEF, SELECT, CITB and EU skills) for construction, heating and electrical.

We expect some installers will already have some of the qualifications already and if not they can either gain qualifications through Scottish colleges or alternatively they can go through a Recognition of Prior Learning (RPL) route whereby colleges will assess their current competency against the qualifications. This may lead to reduced costs and time for the installers given the experience they already have.

We recognise that this will take time and that is why we will include in the consultation questions to identify what is a reasonable time to achieve these requirements.

Costs

We have liaised with ESP to estimate some of the costs associated with achieving the skill requirements set out in the skills matrix they developed and these costs can be summarised as follows. However, it is worth emphasising that some contractors may have these qualifications already and if they do not then the RPL route may be less expensive but this will depend on their current skills and experience.

- Apprenticeship costs can be [found here](#).
- Ground Source/Air Source Heat Pump training - £600/person
- Solar thermal training - £600/person
- External wall application £3000/person

These costs can be offset significantly through the various skills funding announced in the Programme for Government 2020-21. This includes the doubling of the Flexible Workforce Development Fund to £20m - enabling employers to access up to £15,000 each to address skills gaps in their workforce

Scottish Firms Impact Test

Prior to consultation we have identified the following risks which we believe can be mitigated. We believe these primarily relate to installers.

- **Installation companies think the skill requirements are unnecessary** – we think this is an acceptable risk as their respective sector skills and trade bodies who represent them agree that its required. It's also quite possible that the more unscrupulous companies would resist but that may be a positive, particularly if the skill requirements remove these companies so they cannot operate under our Heat in Buildings Programme.
- **Installation companies are concerned they won't have time or funding to meet the requirements** – we think this is a valid concern but can be mitigated in two ways. Firstly, we would make the requirements non-mandatory initially but with the clear intention that they will at some point in the future. Secondly, as already mentioned there is a significant package of support for skills announced our Programme for Government.
- **Installers are unsure about how these requirements relate to certifications** – we have made it clear in our proposals that these requirements would be fully integrated into the BSI PAS 2035/30 and MCS standards.
- **Installers are unsure about how these requirements relate to certifications** – we have made it clear in our proposals that these requirements would be fully integrated into the BSI PAS 2035/30 and MCS standards.
- **Installers in remote rural and island areas may find it difficult to meet the skill requirements** – we are very aware of the challenges faced by suppliers in these areas including access to training and this is something we are keen to address. Current sources of information for this include:
 - Energy efficiency workshop in Shetland feedback report, Energy Saving Trust, 2017
 - Remote rural and island supply chain research report, Energy Saving Trust and Changeworks, 2015

We plan to organise a virtual workshop with suppliers and other stakeholders in these areas to better understand these issues to ensure suppliers in these areas are not put at a disadvantage.

Key themes to be discussed during the virtual workshops (Scotland-wide and one specifically for remote rural and island areas) include:

- Impact on the supply chain based on our proposals.
- Timings for introducing the skill requirements
- Funding
- Ability of suppliers to access training provision locally and potential use of digital technologies for upskilling.

We are aware of two industry surveys that have been issued to businesses that help inform this work. The first is Scotland Excel who manage an energy efficiency public sector framework.

In September 2020, Scotland Excel invited energy efficiency contractors to participate in a short survey to establish skills gaps within the market and to help inform the development of their renewal framework.

There were 26 responses received from both large and small contractors who deliver various measures. An initial review of the survey data has revealed that there are key skill gaps within the insulation sector in comparison with others.

However, it is evident that further consultation and workshops with the market is needed to fully understand the gap in relation to the required minimum qualifications as set out within the skills matrix.

The second is the electrical trade body, SELECT, conducted a short survey on skills with their members in 2019 with 51 responses. Key insights were:

- 100% of respondents thought energy efficiency training should be included in the Electrotechnical Apprenticeship
- The most popular type of energy efficiency training was 'awareness of products and technologies'. EV charging points, smart controls and solar PV were also mentioned.

Competition Assessment

The market for qualifications is already a competitive market and we understand that any recognised training provider with an appropriate awarding body approval can provide approved qualifications - which are regulated by SQA - based on the National Occupational Standards. Therefore we do not envisage any competition issues with what we are proposing as we are not stipulating specific training providers.

It is recognised that a lot of the current training provision is manufacturer led. However, we do not envisage a significant impact for this training as under our proposals we see a role for both recognised qualifications and manufacturer training.

However, we will include a question on competition within the public consultation to ensure any areas or issues we haven't considered are provided for consideration.

Consumer Assessment

We think it is vitally important that consumers have robust quality assurance for any work undertaken on their homes and we believe that skills are a key component of this. Overall, we believe the proposals outlined in this document will result in greater benefits for consumers on the basis that industry approved, competent, skilled trades people will carry out the work to their properties. This is a key reason why we plan to introduce these requirements as we believe this will significantly address consumer detriment in relation to poor quality of installations due to lack of skills. However, it should be recognised that there is expected to be a cost associated with this borne by the supplier which in turn may result in slightly higher installation costs. We think this is acceptable as it will ensure a higher quality and standards of work which will last the expected lifetime of the measure, given historic issues have led to work being redone earlier than anticipated.

However, we will include a question on competition within the public consultation to ensure any areas or issues we haven't considered are provided for consideration.

Test run of business forms

N/A, as the forms for this are already well established through Scotland's college network.

Digital Impact Test

The introduction of the proposals in this document are not expected to have any significant digital impact. However, it should be acknowledged that there is a significant opportunity to develop blended learning to enhance current training provision which will give suppliers an extra option for training provision. We plan to include a question covering digital within our consultation.

Legal Aid Impact Test

N/A, the proposals will not create a new procedure or right of appeal to a court or tribunal, or any change in such a procedure or right of appeal.

Enforcement, sanctions and monitoring

TrustMark is the UK-government approved quality assurance scheme that checks compliance with the BSI standards and consequently TrustMark are responsible for enforcement, sanctions and monitoring through their Scheme Providers. For small-scale renewables MCS are responsible for this through their Certification Bodies.

Implementation and delivery plan

The key milestones and dates for implementing the proposals within this document are as follows:

- Public consultation on skills published alongside the Heat in Buildings Strategy – February 2021.
- Consultation closes – April 2021.
- Formal proposals to BSI and MCS on skill requirements for Scotland sent – June/July 2021.
- We publish our response to the consultation – mid 2021.
- Scottish skill requirements fully integrated into BSI and MCS standards – mid/late 2021.
- Scottish skill requirements become mandatory in BSI and MCS standards – 2023 (TBC)

Summary and recommendation

The Scottish Government proposes to implement Option 2

- **Summary costs and benefits table**

Option	Total benefit per annum: - economic, environmental, social	Total cost per annum: - economic, environmental, social - policy and administrative
1	No additional benefits envisaged.	No additional increase in costs envisaged.
2	<p>Economic - higher skilled individuals are more productive and therefore have higher earning potential and better job security, this benefits both the individual directly as well as businesses and the wider economy.</p> <p>Environmental – improved skills leads to higher quality installs leading to better outcomes for the environment.</p> <p>Social – improved skills leads to higher quality installs leading to better outcomes for consumers which in turn leads to lower energy costs, improved comfort levels and addresses fuel poverty. Also creates improved pathways</p>	<p>Economic – we expect any additional training requirements will be supported heavily through our Programme for Government skills funding including the Flexible Workforce Development Fund. There will also be the opportunity cost of not working arising from attending training.</p> <p>Environmental – no environmental costs.</p> <p>Social – potentially more difficult getting skilled suppliers in the short term as industry works to meet the skill requirements</p> <p>Policy and administrative – dependent on consultation</p>

	for careers and supports young people enter the market.	responses in terms of government intervention to support though we've already highlighted the funding to support this.
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Declaration and publication

I have read the Business and Regulatory Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options. I am satisfied that business impact has been assessed with the support of businesses in Scotland.

Signed:



Date: 3 February 2020

**Paul Wheelhouse
Minister for Energy, Connectivity and the Islands**

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