RISE | Retrofit information, support & expertise

Heat pump installs certification explainer

Supply chain advice pack

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Introduction

This advice pack has been developed to support the supply chain in the delivery of heat pumps within the UK retrofit sector. It provides clear practical guidance on the certification requirements, training pathways and best practices to help meet industry standards.

The Warm Homes funding initiatives, including the Social Housing Fund (SHF) Wave 3 and Local Grant (LG), emphasise the use of low carbon heating (LCH) solutions to improve energy efficiency and reduce carbon emissions. Both SHF and LG guidance documents encourage the adoption of technologies like heat pumps to achieve these goals.

Heat pumps are an effective low carbon heating solution that can significantly reduce energy consumption in the home and associated carbon emissions. They work by transferring heat from the air, ground, or water into buildings, providing efficient heating and cooling.

Benefits of heat pumps

- **Energy efficiency:** Heat pumps can achieve efficiencies greater than 300%, meaning they produce more than three units of heat for every unit of electricity consumed. This efficiency is measured by the Coefficient of Performance (COP), which can vary depending on operating conditions[1].
- **Carbon reduction:** Heat pumps can significantly reduce carbon emissions compared to traditional heating systems (approx. 2,900 kg per year when compared to a G-rated boiler in a semi-detached home)[2].
- **Cost savings:** Use of heat pumps can lead to lower energy bills by reducing the amount of energy needed for heating.
- **Versatility:** Heat pumps can be used for both heating and cooling, making them suitable for various applications.

Heat pump certification

In England, Microgeneration Certification Scheme (MCS) certification is a key requirement for installers of heat pumps, ensuring high standards of quality and consumer protection. Unlike Scotland's grant-supported certification process, English installers must independently fund their certification. However, funding opportunities may exist through industry initiatives or training providers.

[1] Heat pumps: everything you need to know - Energy Saving Trust

[2] Cut through the hot air: four heat pump questions clarified - Energy Saving Trust

The process

Becoming MCS Heat Pump certified involves several steps:

Application: Submit an application to a suitable MCS certification body(see list of certification bodies here).
Assessment: Undergo an assessment to demonstrate compliance with MCS standards.
Quality Management System (QMS): Implement a QMS that ensures installations meet MCS requirements.
Training and competency: Ensure all personnel involved in installations are adequately trained and competent.

Demonstrating competency to become MCS certified

Contractors must meet the MCS 025 competency standard, which includes:

- **Training:** Approved training courses available from providers including BPEC, LCL, NICEIC, and OFTEC.
    - **BPEC -** hands-on, MCS-recognised training focused on practical installation skills and system design.
    - **LCL -** Level 3 qualification endorsed by the Heat Pump Association, covering both air and ground source systems.
    - **NICEIC -** a short, grant-eligible course that prepares installers for MCS and other certification schemes.
    - **OFTEC -** flexible training aligned with MCS standards, supporting both installation and system design for low-carbon heating.
- **Qualifications:** Relevant qualifications such as NVQ Level 3 in domestic plumbing and heating (equivalent to Scotland's SVQ3). Depending on the type of heat pump system, engineers may also need an F-Gas certificate.
- **Experience:** Demonstrable training and/or experience with heat pump systems.
- **Reassessment:** MCS certified contractors are reassessed every five years.

Certification types

Contractors can be certified for:

- **Heat Pump Standard (Design) (MIS3005-D):** Focuses on the design of heat pump systems, including heat loss calculations, system sizing, and specification. This certification is ideal for professionals such as heat pump surveyors or system designers who assess properties and create installation plans.
- **Heat Pump Standard (Installation) (MIS3005-I):** Focuses on the physical installation, commissioning, and handover of heat pump systems. This is suited to installers and engineers responsible for fitting and configuring the systems on-site.

Sub-contracting

Under the MCS Umbrella Scheme, subcontracting must follow MCS Standard (MCS001-1), which includes:

- **Formal contract:** A written contract between the MCS installer and the subcontractor.
- **Competency and insurance:** Ensuring the subcontractor has the necessary capacity, competency, and appropriate insurances.
- **Responsibility:** The MCS contractor assumes responsibility for the installation at handover.

Protecting consumers

MCS certified contractors must comply with consumer codes to protect customers. Key issues covered include:

- **Consumer code membership:** Membership in a Chartered Trading Standards Institute (CTSI) Consumer Code, such as the Renewable Energy Consumer Code (RECC) or the Home Insulation and Energy Standards (HIES).
- **Customer protection:** Addressing issues like adverse behaviour, performance information, contracts, cancellation rights, and dispute resolution.

Best practice

- **Quality workmanship:** Ensure installations are carried out to an acceptable standard.
- **Customer care:** Provide excellent customer service and support.
- **Continuous improvement:** Stay updated with industry developments and training.

Useful links

- BPEC - Home | Pride Through Achievement | BSE Sector | BPEC
- Chartered Trading Standards Institute - CTSI - The Chartered Trading Standards Institute, UK
- Energy Saving Trust – Energy at home – Heat Pumps
- Heat Pump Association - https://www.heatpumps.org.uk/
- HIES Consumer Code - HIES Consumer Code: Renewable Energy Installation Protection
- LCL - Delivering Building Services Qualifications Since 2004 - LCL Awards
- Microgeneration Certification Scheme - Umbrella Schemes - MCS
- Microgeneration Certification Scheme (MCS) - https://mcscertified.com/
- NICEIC - NICEIC | UK Electrical Certification and Training
- OFTEC - oftec.org

RISE resources

Podcast: "Heat Pump Lessons from Retrofit with Kensa" – available **here**.

Masterclass: "Tenant experience of Air Source Heat Pumps" – available **here**.

Podcast: "Heat Pump user experiences and FAQs" – available **here**.

Masterclass: "Solar-Powered Air Source Heat Pumps" - available **here**.

Podcast: "Heat Pumps: tackling the problem of over and under specification" available **here**.

Quick Guide: "Update to the Air Source Heat Pumps Planning Regulations" - available **here**.