



The Certification Mark for Onsite
Sustainable Energy Technologies

Microgeneration Certification Scheme (MCS)

MCS Competency Guidance

Version 1.1

Effective date: 06/02/2019



The Certification Mark for Onsite
Sustainable Energy Technologies

Contents

COMPETENCY CRITERIA	3
DEMONSTRATION OF COMPETENCE	3
INSTALLER ELECTRICAL COMPETENCIES	4
INSTALLER HEATING COMPETENCIES	4
RECOGNISED SHORT COURSES OR QUALIFICATIONS IN MCS TECHNOLOGIES.	5
ELECTRICAL DESIGN COMPETENCIES	5
HEATING DESIGN COMPETENCIES	5
SPECIALIST SKILLS	5
ANNEX	6
Courses	6
Heat Technologies General – Energy Efficiency	6
Biomass	6
Heat Pumps	7
mCHP – Micro Combined Heat and Power	7
Metering	7
Solar Thermal	8
Solar PV	8
AMENDMENTS ISSUED SINCE PUBLICATION	9



The Certification Mark for Onsite
Sustainable Energy Technologies

COMPETENCY CRITERIA

In order to undertake MCS certification, an installation company will be asked to demonstrate how they engage the services of skilled, competent, and experienced individuals in roles to fulfil each activity required to meet and maintain the requirements of the scheme.

This includes confirmation of the competence of those individuals involved in the supply, design, installation, set to work and commissioning of microgeneration systems for which the company is seeking certification.

These roles can be fulfilled by one individual or could be fulfilled by a number of individuals to suit the company's requirements.

DEMONSTRATION OF COMPETENCE

A company's competence can be demonstrated in the following ways:

- Providing evidence of approved and in date qualifications/short courses being held by individuals in the company, or:
- Certification Body validation of your evidence of competency (also called Experienced Workers Route), or:
- A combination of the above two routes.

A named Nominee responsible for the company meeting the MCS requirements must be assigned.

This document addresses the design and install competencies required by MCS Contractors.

A named Nominated Technical Person(s) responsible for all technical aspects on behalf of the company within the scope of its MCS certification must be assigned.

Competencies cover all roles within a company from surveying, to maintenance and fault-finding. In addition to the named Nominee and Nominated Technical Person(s), your company will also have to demonstrate that it has any other competencies required to cover the work being undertaken such as health and safety.

The scope of the competency also needs to be taken into account.

For example:

- a domestic electrician with single phase competencies should not be covering three phase work.
- a heating engineer who is competent to install domestic work should not be covering commercial work.



The Certification Mark for Onsite
Sustainable Energy Technologies

INSTALLER ELECTRICAL COMPETENCIES

Electricians within the MCS Contractor company can demonstrate their competencies in installing electrical renewable systems by holding the appropriate credentials:

- A recognised electrical qualification that satisfies the requirements of Electrotechnical Assessment Specification, Appendix 4 published by the IET
<https://electrical.theiet.org/media/1962/eas-15-350-february-2015.pdf>
- Registration with a Scheme Operator authorised under the relevant Building Regulations
- An industry recognised short course in the particular MCS technology e.g. Solar Photovoltaics or Wind (small or medium), please see the ANNEX below for acceptable courses
- Where relevant to the scope of work being undertaken, the Electrician/s must show awareness in asbestos and other related health and safety issues such as manual handling, working at heights and fire safety.

INSTALLER HEATING COMPETENCIES

Heating engineers within the MCS Contractor company can demonstrate their competencies by holding the appropriate credentials:

- A recognised heating qualification such as a Level 2 or Level 3 NVQ or SVQ in plumbing or heating & ventilation or gas or oil or equivalent certification, Gas Safe (CCN1). The student must be capable of installing a wet central heating circuit.
- Registration with a Scheme Operator authorised under the relevant Building Regulations
- An industry recognised unvented cylinder/hot water systems and safety course or qualification (G3), please see the ANNEX below for acceptable courses
- Water regulations training recognised by the Water Regulations Advisory Scheme (WRAS)
www.wras.co.uk/contacts/useful_external_links1/external_links/certification_bodies/a_n%20energy%20efficiency%20for%20domestic%20heating%20certificate
- An energy efficiency for domestic heating certificate (this is not required for Solar Thermal)
- An industry recognised short course or qualification in the particular MCS technology e.g. Biomass, Heat Pumps or Solar Thermal, (please see the ANNEX below for acceptable courses)
- Where relevant to the scope of work being undertaken, the Heating Engineer/s must show awareness in asbestos and other related health and safety issues such as manual handling, working at heights and fire safety.

That is, you need to demonstrate from the above list that you are a competent heating engineer who can install this heating technology.



The Certification Mark for Onsite
Sustainable Energy Technologies

RECOGNISED SHORT COURSES OR QUALIFICATIONS IN MCS TECHNOLOGIES.

These could be provided by Further Education Colleges, Training Providers or Manufacturers. They would in most circumstances be assessed by an Awarding Organisation or a Certification Body. Details of available renewable technology courses has been provided in the ANNEX of this document.

ELECTRICAL DESIGN COMPETENCIES

These competencies such as cable or component sizing are normally addressed as part of installer and PV short courses or qualifications. Expert electrical engineering knowledge should be sought for any issues that are outside of someone's direct competency.

HEATING DESIGN COMPETENCIES

MCS provides the MCS Biomass calculator and the MCS Heat Pump calculator and associated guidance to assist designers in completing MCS compliant designs.

The Domestic Heating Design Guide (www.dbsp.co.uk) provides guidance on how to design domestic heating systems.

SPECIALIST SKILLS

Some MCS technologies require specialist skills. For example, a solar installation (PV or thermal) needs to ensure that a roof is as weather and fire proof as before the installation was undertaken. Likewise, GSHP installations can require horizontal collector competent groundworkers or vertical collector competent drillers who know how to install and backfill the collector.

An MCS installation company will need to demonstrate to its Certification Body that it has these competencies where required.



The Certification Mark for Onsite
Sustainable Energy Technologies

ANNEX

The following courses have been provided by Awarding Organisations or Training Providers. This ANNEX is intended to be a non-exhaustive list of courses mapped to the MCS Scheme Criteria.

If a mapped course is not listed, a request to include the course in this document should be submitted via email to the MCS Helpdesk (mcs@gemserv.com) by an Awarding Organisation or Certification Body.

If as an MCS Contractor you hold a qualification that is not listed in this ANNEX, please contact your Certification Body.

Please note some MCS standards have been updated since the development of these courses, the content of these courses may not cover all the MCS Scheme Criteria. MCS is not responsible for the content of external training packages/ course content.

It is the responsibility of the MCS Contractor to ensure they hold the appropriate competencies for the scope of their own installation work.

Courses

Heat Technologies General – Energy Efficiency

- LCL Level 3 Award in Energy Efficiency for Gas fired and Oil fired domestic heating and Hot water systems
- Cert-ain Certification Energy efficiency for gas fired and oil fired domestic heating and hot water systems
- BPEC Part L Energy Efficiency

Biomass

- BPEC N/A BPEC Solid biomass and biomass heating systems
- City & Guilds Level 3 NVQ Diploma in Domestic Plumbing and Heating (6189-31) (600/1122/1) biomass pathway
- HETAS N/A HETAS Biomass Appliance Installer Mapped Course and assessment process
- HETAS H005DE biomass course
- LCL Level 3 Award in the Installation, Commissioning and Maintenance of Wood Pellet Burning Appliances
- City & Guilds Level 3 NVQ Diploma in Domestic Heating (6189-41) 600/1473/8 Biomass pathway



The Certification Mark for Onsite
Sustainable Energy Technologies

Heat Pumps

- BPEC Level 3 Award in the Installation and Maintenance of Heat Pump Systems (Non-refrigerant Circuits)
- BPEC Heat pump system (NOS Mapped)
- BPEC Level 3 Award in the Installation and Maintenance of Heat Pumps Systems (Non-refrigerant Circuits) - 600/6606/4
- City & Guilds Level 3 Award in the Installation and Maintenance of Heat Pump Systems (Non-refrigerant Circuits)
- City & Guilds Level 3 Award in the Installation of Heat Pump Systems (Non-refrigerant Circuits)
- City & Guilds Level 3 NVQ Diploma in Domestic Plumbing and Heating (6189-31) (600/1122/1) Heat pumps pathway
- EAL Level 3 Award in the Installation and Maintenance of Heat Pump Systems (Non-refrigerant Circuits)
- EAL Level 3 Award in the Installation of Heat Pump Systems (Non-refrigerant Circuits)
- LCL Level 3 Award in the Installation and Maintenance of Heat Pump Systems (Non-refrigerant Circuits)
- LCL Level 3 Award in the Installation and Maintenance of Air Source Heat Pump Systems (Non-refrigerant Circuits)
- BPEC Level 3 NVQ Dip in Domestic Heating 600/6871/1 – EN2 (Heat Pumps)
- BPEC Level 3 NVQ Dip in Domestic Plumbing & Heating 600/6863/2 – EN2 (Heat Pumps)
- NICEIC Heat Pump qualification
- ProQual Ltd Award in the Installation of Heat Pump Systems (Non-refrigerant Circuits)
- City & Guilds Level 3 NVQ Diploma in Domestic Heating (6189-41) 600/1473/8 Heat pumps pathway

mCHP – Micro Combined Heat and Power

- BPEC Defined Scope Baxi Ecogen mCHP

Metering

- BPEC Level 2 award in Principles of Metering for Renewable Heat Installations
- LCL Level 2 Award in the Principles of Metering for Renewable Heat Installations



The Certification Mark for Onsite
Sustainable Energy Technologies

Solar Thermal

- BPEC Level 3 Award in the Installation and Maintenance of Solar Thermal Hot Water Systems
- BPEC Level 3 Award in the Installation and Maintenance of Solar Thermal Hot Water Systems - 600/6608/8
- BPEC Solar thermal systems (NOS mapped)
- City & Guilds Level 3 Award in the Installation and Maintenance of Solar Thermal Hot Water Systems
- City & Guilds Level 3 NVQ Diploma in Domestic Plumbing and Heating (6189-31) (600/1122/1) Solar thermal pathway
- City & Guilds Level 3 Award in the Installation of Solar Thermal Hot Water Systems
- EAL Level 3 Award in the Installation and Maintenance of Solar Thermal Hot Water Systems
- EAL Level 3 Award in the Installation of Solar Thermal Hot Water Systems
- LCL Level 3 Award in Energy Efficiency for Gas fired and Oil fired domestic heating and Hot water systems
- LCL Level 3 Award in the Installation and Maintenance of Solar Thermal Hot Water Systems
- BPEC Level 3 NVQ Dip in Domestic Heating 600/6871/1 – EN1 (Solar Thermal)
- BPEC Level 3 NVQ Dip in Domestic Plumbing & Heating 600/6863/2 – EN1 (Solar Thermal)
- NICEIC Solar Thermal Hot Water qualification
- ProQual Ltd Level 3 Award in the Installation and Maintenance of Solar Thermal Hot Water Systems
- ProQual Ltd Level 3 Award in the Installation of Solar Thermal Hot Water Systems
- City & Guilds Level 3 NVQ Diploma in Domestic Heating (6189-41) 600/1473/8 Solar thermal pathway

Solar PV

- BPEC Level 3 Award in the Installation and Maintenance of Small Scale Solar Photovoltaic Systems
- BPEC Level 3 Award in the Installation and Maintenance of Small Scale Solar Photovoltaic Systems - 600/6283/6
- BPEC Solar photovoltaic (NOS mapped)
- City & Guilds Level 3 Award in the Installation and Maintenance of Small Scale Solar Photovoltaic Systems
- City & Guilds Level 3 Award in the Installation of Small Scale Solar Photovoltaic Systems
- EAL Level 3 Award in the Installation and Maintenance of Small Scale Solar Photovoltaic Systems
- EAL Level 3 Award in the Installation of Small Scale Solar Photovoltaic Systems



The Certification Mark for Onsite
Sustainable Energy Technologies

- LCL Level 3 Award in the Installation and Maintenance of Small Scale Solar Photovoltaic Systems
- ProQual Ltd Level 3 Award in the Installation and Maintenance of Small Scale Solar Photovoltaic Systems
- ProQual Ltd Level 3 Award in the Installation of Small Scale Solar Photovoltaic Systems

Wind turbines

- Manufacturers Certificated Training

AMENDMENTS ISSUED SINCE PUBLICATION

Document Number:	Amendment Details:	Date:
1.0	Initial publication	01/05/2018
1.1	Update to the courses listed in the Annex	06/02/2019