



Notification Number: 2014/15/UK

The Domestic Renewable Heat Incentive Scheme Regulations 2014

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Message

Message 001

Communication from the Commission - TRIS/(2014) 00047

Directive 98/34/EC

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Bejelentés - Notifika - Kennisgeving - Zawiadomienie - Notificação - Hlásenie-Obvestilo - Ilmoitus - Anmälan - Нотификация : 2014/0015/UK -
Notificare.

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(MSG: 201400047.EN)

1. Structured Information Line

MSG 001 IND 2014 0015 UK EN 08-01-2014 UK NOTIF

2. Member State

UK

3. Department Responsible

Department for Business, Innovation and Skills
European Reform Directorate
1 Victoria Street, London, SW1H 0ET.

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3. Originating Department

Department of Energy and Climate Change (DECC)

4. Notification Number

2014/0015/UK - N00E

5. Title

The Domestic Renewable Heat Incentive Scheme Regulations 2014

6. Products Concerned

1) Equipment for the microgeneration of renewable heat:

- a. Air to water heat pumps using electrically-driven compressors
- b. Biomass-only boilers
- c. Biomass pellet-only stoves with integrated boilers
- d. Ground (and water) to water heat pumps using electrically-driven compressors
- e. Evacuated tube and flat plate solar thermal collectors

2) Assured installation of that equipment

3) Meters used for calculating payments

4) Metering and monitoring service packages (covering the technical requirements for the metering equipment and the requirements for the provis



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the metering service)

5) Minimum air quality requirements for biomass systems relating to emissions of oxides of nitrogen (NO_x) and particulate matter (PM)

6) Minimum Seasonal Performance Factor for heat pumps of 2.5

7. Notification Under Another Act

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8. Main Content

The Renewable Heat Incentive (RHI) scheme is designed to incentivise the generation of renewable heat in the United Kingdom, taking into account financial and non-financial barriers present, whilst ensuring that the renewable heat technology and its installation are of suitable quality and value for money and that the heat generated and used, for which payments will be made, is measured using suitable measuring equipment.

Keywords: renewable heat; technology; product; biomass boiler; biomass stove; air source heat pump; ground source heat pump; solar thermal collector; installation; meter; metering and monitoring; Microgeneration Certification Scheme (MCS); air quality; oxides of nitrogen (NO_x), particulate matter (PM); test laboratory; type testing range; emissions certificate; fuel type; moisture content.

9. Brief Statement of Grounds

Technology standards (EN standards)

The eligible technologies must be certified in accordance with the following standards at the time of their installation:

1) Air to water heat pumps using electrically-driven compressors

Only air to water heat pumps which use air from outside a property that isn't exhaust air are eligible.

Furthermore, such heat pumps will need to be accredited under one of the following sets of the EN 14511 standard as follows:

a. EN 14511-1: 2013, EN 14511-2: 2013, EN 14511-3:2013 and EN 14511-4: 2013;

b. EN 14511-1: 2011, EN 14511-2: 2011, EN 14511-3: 2011 and EN 14511-4: 2011;

c. EN 14511-1: 2007, EN 14511-2: 2007, EN 14511-3: 2007 and EN 14511-4: 2007; or

d. EN 14511-1: 2004, EN 14511-2: 2004, EN 14511-3: 2004 and EN 14511-4: 2004

The rationale is to help identify products that fall within the outline description of eligible heat pumps and to ensure a level of quality of the product for the consumer. It also helps ensure value for money for the financing of the domestic RHI scheme from the public purse.

2) Biomass-only boilers

Only boilers that deliver heat to a property using a liquid are eligible. They also cannot be designed to generate heat for the purpose of cooking for the consumer.

Furthermore, such boilers will need to be either a condensing system or accredited under one of the following standards:

a. EN 303-5:2012;

b. EN 14785:2006;

c. EN 12809:2001+A1:2004; or

d. EN 303-5:1999.

The rationale is to help identify products that fall within the outline description of eligible biomass boilers and to ensure a level of quality of the product for the consumer. It also helps ensure value for money for the financing of the domestic RHI scheme from the public purse.

3) Biomass pellet-only stoves with integrated boilers

Only stoves that deliver heat to a property using a liquid are eligible. They also cannot be designed to generate heat for the purpose of cooking for the consumer. Such stoves will need to be either a condensing system or accredited under the EN 14785:2006 standard.

The rationale is to help identify products that fall within the outline description of eligible stoves and to ensure a level of quality of the product for the consumer. It also helps ensure value for money for the financing of the domestic RHI scheme from the public purse.

4) Ground (and water) to water heat pumps using electrically-driven compressors

Such heat pumps will need to be accredited under one of the following sets of the EN 14511 standard as follows:

a. EN 14511-1: 2013, EN 14511-2: 2013, EN 14511-3:2013 and EN 14511-4: 2013;

b. EN 14511-1: 2011, EN 14511-2: 2011, EN 14511-3: 2011 and EN 14511-4: 2011;

c. EN 14511-1: 2007, EN 14511-2: 2007, EN 14511-3: 2007 and EN 14511-4: 2007; or

d. EN 14511-1: 2004, EN 14511-2: 2004, EN 14511-3: 2004 and EN 14511-4: 2004

The rationale is to help identify products that fall within the outline description of eligible heat pumps and to ensure a level of quality of the product for the consumer. It also helps ensure value for money for the financing of the domestic RHI scheme from the public purse.

5) Evacuated tube and flat plate solar thermal collectors

Such collectors will need to be accredited under one of the following sets of standards:

a. EN 12975-1:2006+A1:2010 and EN 12975-2:2006; or

b. EN 12976-1:2006 and EN 12976-2:2006.

The rationale is to help identify products that fall within the outline description of eligible solar thermal collectors and to ensure a level of quality of the product for the consumer. It also helps ensure value for money for the financing of the domestic RHI scheme from the public purse.

Assured installation of renewable heating equipment

An eligibility criterion of the domestic RHI scheme is that plant must be certified under either:

- the Microgeneration Certification Scheme (MCS) as being installed in accordance with the relevant installation standard, or
- an equivalent scheme accredited under EN 45011 or EN ISO/IEC 17065:2012 as being installed in line with the installation requirements for a plant of that type which are equivalent to the relevant MCS installation standard.

For plant installed after the launch of the scheme, the relevant MCS installation standards are:

i) for biomass: Microgeneration Installation Standard: MIS 3004 Requirements for contractors undertaking the supply, design, installation, set to work commissioning and handover of solar heating microgeneration systems, version 4.0, published 16th December 2013

ii) for heat pumps: Microgeneration Installation Standard: MIS 3005 Requirements for contractors undertaking the supply, design, installation, set



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work, commissioning and handover of microgeneration heat pump systems, version 4.0, published 16th December 2013; or
(iii) for solar thermal plant: Microgeneration Installation Standard: MIS 3001 Requirements for contractors undertaking the supply, design, installation set to work, commissioning and handover of solar heating microgeneration systems, version 4.0, published 16th December 2013
Plant installed prior to the launch of the scheme must have been installed in accordance with the standards which were applicable at the time. The MCS scheme has been previously notified to the Commission (see Notification 2007/458/UK). The rationale for the linking of the RHI scheme MCS scheme is to ensure the quality and value for money of installations in an immature market. It also helps to ensure value for money for the financing of the scheme drawn from the public purse. The MCS standards provide protection for consumers relating to technical aspects of the installation. MCS also ensures that people who buy renewable heating systems are covered by consumer protection schemes governing the relationship with and service they receive from their installer.

Air Quality

The notifiable technical standards used in these regulations are:

1) Test laboratory accredited to EN ISO/IEC 17025:2005

To ensure a test laboratory is able to test and certificate biomass boilers and stoves to a satisfactory level and to ensure they are regulated they need to be accredited to EN ISO/IEC 17025:2005 standard. This is an international standard that ensures competence of testing and calibration.

2) Testing standards

Testing for emissions of oxides of nitrogen (NOx) and of particulate matter (PM) in accordance with either a) or b) as follows:

a) EN 303-5 1999 or EN 303-5 2012 for both NOx and PM, whichever standard is current at the time of testing; or

b) i) EN 14792:2005 for NOx; and

ii) EN 13284-1:2002 or ISO 9096:2003 for PM

In order to be eligible for the domestic RHI, emissions from boilers or stoves when so tested under either a) or b) above must not exceed 150 gram gigajoule net heat input for NOx and 30 grams per gigajoule net heat input for PM.

The use of these standards allows consistency when testing and comparison between installations in order to identify which installations meet the air quality requirements.

3) Fuel type(s)

Restricting boilers and stoves to the use of fuel type(s) against which they have been successfully tested against for relevant PM and NOx limits, as stated in the results of the testing.

4) Moisture content

Restricting eligible fuels to those with a moisture content sufficiently low to ensure the PM and NOx limits are not exceeded, as stated in the results of the testing.

Metering for Payment

Metering using eligible meters will be required in the domestic RHI in specific situations defined in our regulations for the purpose of making payment. For example, metering will be required when a renewable heating system and an additional plant (e.g. an oil boiler) provide heat to the same property. In situations requiring metering, RHI payments will be made by reference to the metered amount of renewable heat generated.

The reason for requiring metering in certain circumstances is to ensure RHI payments more accurately reflect use of the renewable heating system where supplementary heating systems are in place or where the property is used infrequently.

Meters are required to measure, where applicable:

- the heat output of the eligible plant; and
- the energy consumption of the eligible plant (in the case of heat pumps).

More complicated arrangements for situations where it is not possible only these items are also provided for.

Within our regulations, meters are required to:

- Be installed or checked by an MCS installer;
- Be positioned according to our regulations;
- Be properly calibrated;
- Be properly installed and in good working order; and
- Have a label which enables the meter to be consistently identified by the applicant when they are submitting meter readings.

The reason for setting requirements around the installation of meters is to ensure they consistently and accurately measure the information required to make the correct RHI payment. Our calculation of eligible metered heat is designed specifically to ensure that no products have systematic advantages over any others.

In addition, eligible meters are defined:

- "Eligible electricity meter" means an electricity meter which meets the relevant requirements set out in Annex 1 to the Measuring Instruments Directive, the specific requirements listed in Annex MI-003 to that Directive and the requirements for accuracy class A as defined in Annex MI-003 to that Directive.
 - "Eligible gas meter" means a gas meter which meets the relevant requirements set out in Annex 1 to the Measuring Instruments Directive, the specific requirements listed in Annex MI-002 to that Directive and the requirements for accuracy class 1.5 as defined in Annex MI-002 to that Directive.
 - "Eligible heat meter" means a heat meter which meets the relevant requirements set out in Annex 1 to the Measuring Instruments Directive, the specific requirements listed in Annex MI-004 to that Directive and the requirements for accuracy class 3 as defined in Annex MI-004 to that Directive.
 - "Eligible oil meter" means an oil meter which meets the relevant requirements set out in Annex 1 to the Measuring Instruments Directive, the specific requirements listed in Annex MI-005 to that Directive and the requirements for accuracy class 1 as defined in Annex MI-005 to that Directive.
- We have adopted these classes of meter accuracy as the Measuring Instruments Directive authorises Member States to require such classes for domestic use. Please note that our requirements are minimum requirements

Metering and Monitoring Service Packages

Payments will be available to compensate owners of heat pumps or biomass pellet boilers who enter into a Metering and Monitoring Service Package (MMSP) with their installer. Under an MMSP the installer and customer can monitor the performance of the installed system in detail through the use of advanced meters. The detailed monitoring will offer the basis for ensuring more efficient use of the system, early diagnosis and treatment of problems and improved installation techniques and therefore system performance.

Payments are only available where the renewable heating system is a heat pump or a biomass pellet boiler. Solar thermal systems are not eligible



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because the potential benefit of metering and monitoring service packages on solar thermal systems and the complexity of comprehensive metering solar thermal systems does not justify the cost of the metering and monitoring service packages. Non-pellet boilers are not eligible because the uncertainty with which any efficiency data would be determined is so great that the information would not represent value for money for the domestic RHI scheme. This is because the energy content of logs and chips is highly variable. Stoves with integrated boilers are not eligible because the heat from these systems would be impractical to measure in many cases. For this reason the efficiency estimate that is obtained by measuring biomass stoves will also be inaccurate to the point of the metering and monitoring service package not being value for money for the domestic RHI scheme. Payments are intended to reflect the cost of the meters owners have installed.

To be eligible for an additional payment, an agreement between the installer and customer is required to underpin an MMSP and must cover the following things:

- The position of eligible meters and temperature sensors (eligible meter has the same meaning as when metering for payment is required – see requirements);
- The frequency of data logging;
- The resolution of the meters;
- The service level agreement with regard to “data completeness” (the total number of readings presented over a period divided by the total number of readings that could have been recorded over the same period);
- Requirements for presentation of data to the MCS installer;
- Requirements for presentation of data to the participant;
- The service level agreement for provision of information and advice to the participant by the MCS installer;
- Requirements for provision of data to DECC and Ofgem (who will administer the domestic RHI scheme on behalf of DECC); and
- Consumer protection requirements

The reason for setting requirements around the type and location of meters is to ensure a level of accuracy, ongoing reliability and usefulness of the data obtained. The reason for setting requirements around the provision and presentation of data is to ensure that the data is provided in a format and at a regularity that helps the installer and customer and helps the UK government in developing its understanding of the market.

Seasonal Performance Factor

Ground and water source, and air source heat pumps will be supported under the domestic RHI. Eligible heat pumps will be required to have a Seasonal Performance Factor of 2.5 or above. This is to ensure that the domestic RHI only supports heat pumps considered as renewable energy under the Directive 2009/28/EC, in line with the Commission Decision of 1st March 2013. This minimum standard will ensure that heat pumps provide good return in terms of renewable output and that ultimately, they represent value for money.

New applicants to the scheme will be required to demonstrate to Ofgem that their heat pump has an SPF of 2.5 and above, based on an estimate of the MCS Heat Emitter Guide for Domestic Heat Pumps. The calculations within the Heat Emitter Guide are based on EN 14825, which is the methodology for determining SPF required by the Directive. Using the Heat Emitter Guide provides a reasonably accurate estimate of heat pump output and is relatively straightforward, practical and low-cost to implement. Applicants who installed prior to scheme launch will be assigned a default SPF of 2.5. We would expect heat pump systems designed to meet MCS or equivalent installation standards, and used appropriately, to achieve an SPF of 2.5.

10. Reference Documents - Basic Texts

References of the Basic Texts: The draft regulations will be made using powers conferred on the Secretary of State by section 100 of the Energy Act 2008.

Details of all requirements are set out in the enclosed draft regulations together with additional information in the enclosed 'Domestic Renewable Incentive' policy document and impact assessment.

Furthermore, links to the three MCS standards referred to in section 9 above are provided here:

- Microgeneration Installation Standard: MIS 3004 -

<http://www.microgenerationcertification.org/images/MIS%203004%20Issue%204.0%20Biomass%202013.12.16%20FINAL.pdf>

- Microgeneration Installation Standard: MIS 3005 -

<http://www.microgenerationcertification.org/images/MIS%203005%20Issue%204.0%20Heat%20Pump%20Systems%202013.12.16%20FINAL.pdf>

- Microgeneration Installation Standard: MIS 3001 -

<http://www.microgenerationcertification.org/images/MIS%203001%20Issue%204.0%20Solar%20Heating%20-%202013.12.16%20FINAL2.pdf>

11. Invocation of the Emergency Procedure

No

12. Grounds for the Emergency

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13. Confidentiality

No

14. Fiscal measures

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15. Impact assessment

Yes

16. TBT and SPS aspects

TBT aspect

No - The draft has no significant impact on international trade

SPS aspect

No - The draft is not a sanitary or phytosanitary measure

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