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Renewable Heat Incentive

Non-domestic Renewable Heat Incentive Emissions Certificate

This certificate provides evidence that the tested boiler meets the air quality requirements of the non-domestic Renewable Heat Incentive (RHI) – Reg 5A(3) and Schedule A1. It must be issued by a testing laboratory. Applicants applying for the RHI with biomass boilers must submit a certificate with their application, or alternatively, an environmental permit.

1. TEST HOUSE	
a) name and address of testing laboratory	Environmental Scientifics Group Limited Unit 5 Crown Industrial Estate Kenwood Road Stockport SK5 6PH Tel: 00 44 161 443 0980
b) name and signature of the person authorised by the testing laboratory to issue the certificate	Name: Dave Armitage
	Signature:
c) date of issue of this certificate together with certificate reference number *Please see Note A	Date: *2nd June 2015*
	Ref: *LNO 11741/V4*
d) if testing laboratory is accredited to BS EN ISO/IEC 17025:2005, date of accreditation and accreditation number *(note: if testing conducted after 24 September 2013, the testing laboratory **must be** BS EN ISO/IEC 17025:2005 accredited)*	Date: *11/12/1992*
	Accreditation number: 1015

2. PLANT *Please see Note B*	
a) name of the plant tested	Glen Farrow GF175
b) model of the plant tested	GF175
c) manufacturer of the plant tested	Glen Farrow
d) installation capacity* of the **tested** plant in kilowatts (kW) *defined in the RHI Regulations as the total installed peak heat output capacity of the plant	175kW

e) is the plant a manually stoked, natural draught plant? (that is, without a fan providing forced or induced draught)	No
f) (i) the date the plant was tested* (ii) please confirm that NOx and PM have been tested on the same occasion *This is in reference to the emissions testing for PM and NOx, not any wider range of tests. A specific date is required.	11/03/2014 - 13/03/2014 Yes, NOx and PM tested on the same occasion
g) list of all the plants in the type-testing range* of plants to which the certificate applies, if any[1] Please include the **installation capacity** of each model. **This must follow the ratio rules:* *If the smallest plant in the range is 500kW or less, the largest plant in the range can't be more than double the smallest.* *If the smallest plant in the range is over 500kW, the largest plant in the range can't be more than 500kW greater than the smallest.*	Glen Farrow GF195 Glen Farrow GF210 Glen Farrow GF295

3. FUELS	
a) types of fuels used when testing	Mixed logs with moisture content of 17 – 23 % based on category A classification from EN303-5:2012 according to EN14961-5 Waste wood with moisture content of 14 – 18% based on both grade A & mixed grade municipal, construction/demolition & commercial classification from DEFRA 2008 – Waste Wood as a Biomass Fuel.
b) based on the testing, list the range of fuels that can be used in compliance with the emission limits of 30 grams per gigajoule (g/GJ) net heat input for particulate matter (PM), and 150 g/GJ net heat input for oxides of nitrogen (NOx) *(based if relevant on classifications from EN14961 or EN303-5)*	Waste wood with moisture content of 14-18% and with contaminant levels of no more than 5%. Mixed Logs with moisture content of 17-23%
c) moisture content of the fuel used during testing	14-23%
d) maximum moisture content* of the fuel which can be used with the certified plant(s) so as to ensure that the RHI emission limits are not exceeded. **This value may be obtained from ranges specified in EN 303-5 based on the fuel type(s) tested*	23%

[1] The type-testing approach enables testing laboratories to provide assurance that all boilers in a given range meet the air quality requirements, without needing to specifically test each boiler.

4. TESTS	
Confirm which requirements the emissions of NOx and PM have been tested in accordance with. **Either 4a or 4b should be confirmed, the other should be 'not applicable'**	
a) **if the testing was carried out in accordance with the provisions relevant to emissions of PM and NOx in either BS EN 303-5:1999 or BS EN 303-5:2012[2],** please confirm: - the test was conducted to whichever standard was current at the time of testing.	N/A
b) **if the testing was carried out in accordance with the following requirements,** please confirm: (i) testing was carried out in accordance with: - EN 14792:2005 in respect of NOx emissions, and; - EN 13284-1:2002 or ISO 9096:2003 in respect of PM emissions[3]; and (ii) emissions of PM represent the average of at least three measurements of emissions of PM, each of at least 30 minutes duration; and (iii) the value for NOx emissions is derived from the average of measurements made throughout the PM emission tests.	Yes Yes Yes
c) please confirm the plant was tested at ≥85% of the installation capacity of the plant	Yes
d) please confirm the test shows that emissions from the plant were no greater than 30 g/GJ PM and 150 g/GJ NOx	Yes
e) measured* emissions of PM in **g/GJ** net heat input *this value should be from the test confirmed in 4c. Results from partial load tests are not required. This value must be in the specified units.	Waste Wood 18.3 g/GJ Mixed Logs 27.6 g/GJ
f) measured* emissions of NOx in **g/GJ** net heat input *this value should be from the test confirmed in 4c. Results from partial load tests are not required. This value must be in the specified units.	Waste Wood 44.9 g/GJ Mixed Logs 60.0 g/GJ

Note A: If details from a previously issued certificate are being transferred to this RHI emission certificate template, please note that this document must be **issued by the testing laboratory** as a separate certificate. So the issue date and certificate reference number should be in relation to *this* certificate using the RHI template, not the issue date and reference number of the original certificate.

Note B: If you are including multiple tested plants on one certificate, please ensure that all sections are completed for each tested plant, and are laid out such that it is clear which details relate to which tested plant. If a type-testing range is included as well, please show clearly which type-testing range relates to which tested plant(s), following the type-testing range ratio rules outlined in 2g.

[2] BS EN303-5:1999 and 2012 explain what should be measured and when.
[3] These standards explain how to make the PM and NOx measurements.