

**Report No. K 591 2018 S9 rev-1**

Confirmation of the air quality requirements  
of the domestic or non-domestic  
Renewable Heat Incentive (RHI)

Types:  
**E-Classic ...**

Company:  
**Central Boiler Inc.**

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.

The test results presented in this report refer solely to the test object stated as described on page 2. The report does not represent a general statement about the serial production of the test object and gives not an authorization for use of a TÜV Rheinland test- / certification mark.

| 1. TEST HOUSE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| a) Name and address of testing laboratory                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | TÜV Rheinland Energy GmbH<br>Am Grauen Stein<br>51105 Köln              |
| b) Name and signature of the person authorised by the testing laboratory to issue the certificate                                                                                                                                                                                                                                                                                                                                                                                                          | Name: Reiner Verbert<br>Head of Test Centre<br>Signature: ver           |
| c) Date of issue of this certificate together with certificate reference number *Please see Note A                                                                                                                                                                                                                                                                                                                                                                                                         | Date: 17/02/2014<br>Ref: K 591 2014 E5                                  |
| d) If testing laboratory is accredited to EN ISO/IEC 17025:2005, date of accreditation and accreditation number<br>(note: if testing conducted after 24 September 2013, the testing laboratory <b>must be</b> EN ISO/IEC 17025:2005 accredited)                                                                                                                                                                                                                                                            | Date: 16/01/2018<br><br>Accreditation number:<br>D – PL – 11120- 04- 00 |
| 2. PLANT <i>Please see Note B</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                         |
| a) Name of the plant tested                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | E-Classic 1450<br>E-Classic 3200                                        |
| b) Model of the plant tested                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | E-Classic 1450                                                          |
| c) Manufacturer of the plant tested                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Central Boiler Inc.<br>Greenbush 56726 USA                              |
| d) Installation capacity* of the <b>tested</b> plant in kilowatts (kW)<br><i>*defined in the RHI Regulations as the total installed peak heat output capacity of the plant</i>                                                                                                                                                                                                                                                                                                                             | E-Classic 1450      44 kW                                               |
| e) Is the plant a <u>manually stoked, natural draught</u> plant? (that is, without a fan providing forced or induced draught)                                                                                                                                                                                                                                                                                                                                                                              | Yes<br>Manual stoked with flue gas fan                                  |
| f) (i) The date the plant was tested*<br>(ii) please confirm that NOx and PM have been tested on the same occasion<br><i>*This is in reference to the emissions testing for PM and NOx, not any wider range of tests. A specific date is required.</i>                                                                                                                                                                                                                                                     | 9. June, 2011<br>Yes                                                    |
| g) List of all the plants in the type-testing range* of plants to which the certificate applies, if any <sup>1</sup> Please include the <b>installation capacity</b> of each model.<br><i>*This must follow the ratio rules:<br/>If the smallest plant in the range is 500 kW or less, the largest plant in the range can't be more than double the smallest.<br/>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.</i> | E-Classic 1450      44 kW<br><br>E-Classic 3200      88 kW              |

| <b>3. FUELS</b>                                                                                                                                                                                                                                                                                               |                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| a) types of fuels used when testing                                                                                                                                                                                                                                                                           | Wood logs- Class A1 in accordance with EN 14961-5 |
| 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) | Wood logs- Class A1 in accordance with EN 14961-5 |
| c) moisture content of the fuel used during testing                                                                                                                                                                                                                                                           | 15,97 %                                           |
| 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.<br><i>*This value may be obtained from ranges specified in EN 303-5 based on the fuel type(s) tested.</i>                                               | ≤ 25 %                                            |

| <b>4. TESTS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Confirm which requirements the emissions of NOx and PM have been tested in accordance with. <b><u>Either 4a or 4b should be confirmed, the other should be 'not applicable'</u></b>                                                                                                                                                                                                                                                                                                                                                                                             |                |
| a) <b>if the testing was carried out in accordance with the provisions relevant to emissions of PM and NOx in either EN 303-5:1999 or EN 303-5:2012<sup>2</sup></b> , please confirm:<br>- the test was conducted to whichever standard was current at the time of testing.                                                                                                                                                                                                                                                                                                     | Yes            |
| b) <b>if the testing was carried out in accordance with the following requirements</b> , please confirm:<br>(i) testing was carried out in accordance with:<br>- EN 14792:2005 in respect of NOx emissions, and;<br>- EN 13284-1:2002 or ISO 9096:2003 in respect of PM emissions <sup>3</sup> ; and<br><br>(ii) emissions of PM represent the average of at least three measurements of emissions of PM, each of at least 30 minutes duration;<br><br>(iii) and the value for NOx emissions is derived from the average of measurements made throughout the PM emission tests. | Not applicable |
| 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            |

<sup>1</sup>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.

<sup>2</sup> EN303-5:1999 and 2012 explain what should be measured and when.

<sup>3</sup> These standards explain how to make the PM and NOx measurements.

|                                                                                                                                                                                                                     |                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| e) measured* emissions of PM in <b>g/GJ</b> net heat input<br>*this value should be from the test confirmed in 4c. Results from partial load tests are not required.<br>This value must be in the specified units.  | <b>E-Classic 1450</b> 7,4  |
| f) measured* emissions of NOx in <b>g/GJ</b> net heat input<br>*this value should be from the test confirmed in 4c. Results from partial load tests are not required.<br>This value must be in the specified units. | <b>E-Classic 1450</b> 57,0 |

**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.

**Remarks:** Review of report K5912014S7 dated on 17.02.2014

Cologne, 11.10.2018  
432/pom

TÜV Rheinland Energy GmbH  
Test Centre according to Construction Product  
Regulation 305/2011(CPR)  
Notified Body: 2456

Assessor:

Report released after review:



Dipl.-Ing. A. Pomp



Dipl.-Ing. R. Verbert