

Registration of Wood Gasification Boilers for the Greener Homes Scheme – Phase III

Note: This application form is intended for wood gasification boilers.

If you would like to apply to have a wood pellet / chip boiler listed please use the appropriate alternative form available from: <http://www.seai.ie/greenerhomes>

A. Rationale

The Greener Homes Scheme Phase III provides financial assistance to homeowners who intend to purchase a new renewable heating system for an existing home. The scheme is administered by Sustainable Energy Ireland and aims to increase the use of sustainable energy technologies within Irish homes. The objective of the equipment registration process is to promote quality in the marketplace and maintain consumer confidence to support the continuing deployment of biomass boiler systems in Ireland and to facilitate the administration of the scheme. The equipment registration process is administered by SEAI's Renewable Energy Information Office.

B. Conditions for equipment registration

The Greener Homes Scheme Phase III provides support towards wood gasification boilers installed in residential buildings for central heating. Only registered equipment will be eligible for use under the Greener Homes Scheme. Lists of registered products will be maintained on SEAI's Greener Homes Scheme website at: <http://www.seai.ie/greenerhomes>

In order to be eligible for support under the grant, the equipment to be installed should meet the following criteria:

B.1. Definition of eligible product and identification:

The eligibility applies only to gasification boilers using firewood, or other acceptable wood fuels as per user instructions from the manufacturer as the fuel source. Fossil fuel gasification boilers are not eligible.

Verification of compliance:

A clear description of the boiler must be provided with sufficient details to be able to identify the boiler (manufacturer, identification name or number, construction details, sizes, fuel(s) permitted), their intended application and general considerations for their usage in a heating system. In particular, details of the gasification combustion process are required to be included.

B.2 Performance and reliability:

For a wood gasification boiler to be eligible for the registered list, documentation demonstrating compliance with the minimum standards described below must be submitted.

1. **CE Mark:** compliance with Low Voltage Directive (TH 42075; Directive 73/23/EEC) and Machinery Directive (TH 42073; Directive 98/37/EC).
2. **EN 303-5¹:** Heating boilers for solid fuels, hand and automatically stoked, nominal heat output of up to 300 kW – terminology requirements, testing and marking.
3. **Boiler Efficiency:** Minimum efficiency at nominal heat output:
 - up to 10 kW = 80%;
 - between 10 kW and 200 kW = $73.9 \text{ kW} + 7 \log [\text{nominal heat output in kW}]$;
 - over 200 kW = 90%;
4. **Emissions:** Not exceeding Class 3 emission limits from EN 303-5;
5. **Fuel :** Acceptable fuels must be listed in the user instruction manual by the manufacturer, and the terms and conditions of the boiler warranty must state that use of fuels not specified by the manufacturer would lead to the warranty being affected. Fossil fuel gasification boilers are not eligible for inclusion on the list.
6. **Fire Protection²:** Details of fire prevention features must be detailed.

Verification of compliance:

With regard to CE marking compliance, a declaration of conformity signed by the manufacturer which confirms that all the requirements of EU directives listed above are satisfied.

A copy of the report(s) of testing according to EN 303-5 demonstrating that the boiler efficiency and emissions requirements are met shall be provided for each boiler to be registered (see section B.3 for registration of a type). The test report shall be from a laboratory accredited for testing according to the above standard.

1 Standard commonly applied in Europe. Other test standards can be accepted on a case by case basis at the discretion of SEAI. Please submit full test report clearly showing accredited test laboratory, specific boiler & capacity, signed and dated.

The report shall identify clearly:

- The name and contact details of the testing laboratory;
- The standard used for testing;
- The gasification combustion process and how it takes place. If this is not included as part of the test report, then a description from the testing laboratory in question must be obtained which details the gasification combustion process.
- The name and details of the manufacturer;
- The boiler covered by the test;

The test report shall be dated and signed. Test results must be unequivocal.

Documentation / descriptions should be submitted with the application form outlining the technical basis of fire protection and appropriate certification if available.

B. 3 Registering a Type or Range of Boilers

The type test determines whether the individual boiler sizes of a type or range meets the requirement laid down in the EN 303-5 standard. During the type test the boiler shall be representative of production in its design and equipment. For boilers in a product range which has the same constructional design it is sufficient to test only the largest and smallest boiler provided the ratio of the nominal heat output of the smallest to largest boiler tested is less than or equal to 2:1. However, if within the same product range, this ratio is larger than 2:1; then so many intermediate sizes shall be tested that the ratio 2:1 is not exceeded. This requirement is in line with the EN 303-5 standard.

B.4 System Documentation:

Installation / operation manuals in English shall be submitted with the application. The installation manual shall at least contain the following information (as per EN 303-5):

1. **Technical information:**
 - Necessary draught in mbar
 - Water content in litres
 - Exhaust gas temperature at nominal heat output and minimum heat output in °C
 - Exhaust mass flow at nominal heat output and at minimum heat output in kg/s
 - Flue pipe diameter in mm
 - Water side resistance in mbar
 - Nominal heat output range for each type of fuel in kW
 - Boiler class
 - Combustion period in hours for fuel at nominal heat output
 - Setting range for the temperature controller in °C
 - Minimal return temperature at boiler return tapping in °C
 - Fuel type and water content as well as fuel size
 - Filling chamber capacity in litres and filling opening dimensions in mm

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- Necessary accumulator storage in litres if minimum heat output is less than 30% nominal heat output.
- Auxiliary power requirement in W
- Cold water temperature and pressure for safety heat exchanger in bar
- Electrical connections incl. appliance and main switch off

2. **Installation instructions:**

- The on-site assembly of the boiler (if necessary) and the required water pressure test.
- The installation procedure.
- The commissioning, with information on the boiler output to be set in the output range.
- **Clear installation details regarding flue arrangements and buffer storage requirements**
- Instructions on the location and fitting of the sensors for the control, display and safety equipment.

The operating manual shall contain references to:

- The operation of the boiler, stoking and opening doors without risk.
- Cleaning and cleaning intervals, including the equipment required for the cleaning operations.
- Measures to be taken in the event of a malfunction.
- The reasons for recommending a regular, competent maintenance service and the necessary maintenance intervals.
- The type of fuel and water content and the fuel size.
- The maximum filling height for fuel in the filling chamber.
- The combustion period for fuel types at nominal heat output.

Other documents (brochures etc.) shall not contain any information that is in contradiction with those of the installation / operating instructions.

C. How to apply for Product registration?

C.1. Who can submit an application?

The application for registration for the Greener Homes Scheme can be submitted by the boiler manufacturer or a designated agent in Ireland, however each manufacturer must designate a single point of contact for Ireland.

C.2. How to submit an application?

Before applying, ensure that you have completed the application form correctly and enclosed all relevant information required (see checklist). You can then submit your application by post to:

Joe Jolley.
Sustainable Energy Ireland
Renewable Energy Information Office
Unit A
West Cork Technology Park
Clonakilty
Co. Cork

If the information above is available electronically, you are welcome to supply it by email to joe.jolley@reio.ie as well as by post. If you need further information, please do not hesitate to contact Joe Jolley at +353 (0)23 8863394.

C.3. How long does the registration process take?

Upon receipt of an application, you will be notified within 5 working days of any missing information. Once the application file is complete, the registration process will be completed within 15 working days. If the application is successful, the equipment will be included in SEAI's list of registered products during the next update. This list is generally updated every 10 to 15 working days.

Application Form

1. Supplier Details

Name: _____

Address 1: _____

Address 2: _____

Address 3: _____

County: _____

Tel: _____

Mobile: _____

Fax: _____

Email: _____

Website: _____

Contact persons:

Company director(s): _____

Sales representative(s): _____

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2. Sales:

Please indicate your sales figures in number of wood boiler units supplied or installed directly by your company in Ireland. Please enter figures for different boiler manufacturers in separate tables if you supply boilers by multiple manufacturers. If you require further tables please print or copy this page.

	Supplied ¹	Installed ²
	2004	
Wood gasification boiler, domestic		
	2005	
Wood gasification boiler, domestic		
	2006	
Wood gasification boiler, domestic		

1 Number of boiler units supplied to other companies.

2 Number of boiler units installed directly by your company.

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3. Details of Boilers Submitted for Registration & Checklist

Please complete the following table for each boiler submitted for registration. Where the same model of boiler is available with different nominal heat output capacities, please complete a separate line for each boiler output capacity you wish to include on the registered list.

Manufacturer	Model (Name and Number)	Output Capacity (kW)	Fire Protection Documented	EN 303-5 Test Report Submitted*	CE Declaration Submitted*	Operators Manual Submitted in English	Installers Manual Submitted in English	Meets Minimum Efficiency Requirements	Meets Minimum Emissions Requirements

If additional lines or tables are required please print or photocopy this page and include with application.

4. Warranty

Please declare length of warranty (parts and labour) your customers are offered on the wood gasification boilers supplied by your company. Minimum requirements for registration are 2 years for the boiler.

Boiler: _____years.

5. Declaration

Please sign and date the following declaration.

I/we confirm that the information submitted in the application form is correct to the best of my/our knowledge. I/we accept that the final decision on whether a specific boiler is registered under the Greener Homes Scheme is at the discretion of SEAI.

Name: _____

Authorised Representative of: _____

Signature: _____

Date: _____