

# Irish Bioenergy Association Biomass Designers Register & Biomass Installers Register

## Register Rules [Version Rev 3]

**Approval of Document by:**

Project Steering Group: 4<sup>th</sup> February 2019

IrBEA Management Committee: 12<sup>th</sup> February 2019

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## Register Oversight

### Aim of the Register

The Biomass Practitioners Register's consists of two Register's, a Biomass Designers' Register and a Biomass Installers Register.

The overall aim of the register's is to increase the amount of successfully operational biomass boilers. The Registers are intended to cover non-domestic biomass thermal boilers up to 1MW on the Island of Ireland. Domestic boilers in the Republic of Ireland are covered by a Renewable Installers Register administered by the Sustainable Energy Authority of Ireland ([www.seai.ie](http://www.seai.ie))<sup>1</sup>. To date, boilers over 1MW are installed in the industrial sector and IrBEA have not received particular reports of poor designs/installations for boilers at this scale. The Registers are developed by the Irish BioEnergy Association ([www.irbea.org](http://www.irbea.org)) and while biomass boilers installed by participants in the Register's will clearly benefit from Government Incentives (in both the Republic and Northern Ireland), and IrBEA received funding from SEAI to develop the register's, this should be considered an industry initiative.

### Governance

Members of each register must be members of the Irish BioEnergy Association (IrBEA), and the members of the Registers are part of an IrBEA subgroup known as the 'Biomass Practitioners Register's Sub-Group'.

Members must therefore comply with the IrBEA constitution (available on request from IrBEA), and the scheme is administered by IrBEA. IrBEA can be contacted at the details below:

Website: [www.irbea.org](http://www.irbea.org)      Email: [seanfinan@irbea.org](mailto:seanfinan@irbea.org)

### Steering Committee

A Steering Committee will provide oversight to the Registers. The steering committee will have no fewer than 3 and no greater than 8 members. It will ideally consist of:

- An equal number of members of the Biomass Designers Register and Biomass Installers Register
- A minimum of one, and maximum of two, IrBEA members who are not members of either Register
- No more than one representative of any one company
- SEAI will be represented on the committee and its representative will be Non-voting.

Non IrBEA members, with an interest in the Registers (for example government bodies, members of professional associations, academics) may be invited to join the steering committee as observers. However, unless they join IrBEA, they will not hold a vote at steering committee meetings. No more than 25% of the committee members will be non IrBEA members

Membership of the Steering Committee will be by individuals, and not companies. If an individual is unable to attend, an alternative representative of the company may take their place for a single meeting. Should a committee member not attend 3 consecutive meetings they may be removed from the Steering Committee at the discretion of the voting members in attendance. For clarity, if a

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<sup>1</sup> Details are available at: [https://www.seai.ie/resources/forms/Renewable\\_Installers\\_Registration\\_Form.pdf](https://www.seai.ie/resources/forms/Renewable_Installers_Registration_Form.pdf)

representative of the committee members company attends a Steering Committee in their place, this will not count as attendance in relation to this rule.

A minimum of two meetings of the steering committee will be held every year.

### Chairperson

The Steering Committee will elect a chair who will also represent the Biomass Practitioners Register's on the IrBEA Management Committee.

### Secretary

The IrBEA executive team will provide administrative support to the steering committee.

### General Meeting of Members

All members of the Biomass Practitioners Registers will be invited to attend an Annual General Meeting of the group. This meeting will discuss:

- An update of the Biomass Designers Registers since the previous General Meeting
- New members to the Committee

Where possible, this general meeting will be held in conjunction with another event such as a training course for new members or an IrBEA event.

### Changes to this document

Once this document is approved by the Steering Committee, the Chairperson of the Steering Committee will ask the IrBEA Management Committee to approve the document.

For changes to be made to this document, the following process will be followed:

- Suggestion should be sent in writing to the IrBEA Executive at least 2 weeks prior to the Steering Committee meeting
- Each suggestion will be discussed at the next meeting of the Steering Committee
- If the Steering Committee agree an amendment the document will be updated, and the IrBEA Management Committee asked to approve a new draft

### Fees

Other than requiring participants to be members of IrBEA and having the various requirements listed in this document, IrBEA will not charge additional fees to be on the Registers.

### What is included under this scheme?

The Registers are intended to cover non-domestic biomass boilers, of under 1 MW. The scope of works for the installation is intended to include:

- the biomass fuel store design, location and fuel supply considerations
- the biomass boiler room, the biomass boiler and all equipment associated with it
- the flue of the biomass boiler
- how the biomass heating system connects to the existing heating system, or for a new installation, how the biomass heating system connects to the main header for the building
- the heating control system

## Biomass Designers Register

### Requirements to join the Biomass Designers Register

To join the Biomass Designers' Register, applicants (it is assumed most applicants will be companies) must provide evidence to IrBEA, that they:

- Employ an Engineer, who
  - o Is either a
    - Chartered Engineer, or is an
    - Associate Engineer registered with Engineers Ireland, *and* who has worked in the biomass sector for over 5 years *and* has supplied IrBEA a list of at least 10 biomass installations they were the principal designer of.
  - o Has attended a 2-day Biomass Practitioners course run by IrBEA (detailed in the Appendix)
- Have professional indemnity and public liability insurance
- Have a Tax Clearance Certificate
- Northern Ireland Companies need to be Tax compliant in NI and have Tax Clearance Certificate in Republic of Ireland
- Are IrBEA members under the same name as they will be listed on the Biomass Designers Register
- Sign a declaration to confirm that they agree to the rules and criteria for this register

If an individual is on the Biomass Designers Register, they must be an individual member of IrBEA, and their insurance (and other documents) should be in their name.

### Annual Renewal

On an annual basis, IrBEA will require members of the Biomass Designers Register to provide evidence that they still fulfil the requirements to join the Biomass Designers Register.

IrBEA may periodically run additional training events for members of the Biomass Register's. Members of the Registers may be required to attend these training events and/or demonstrate they have attended other training courses related to biomass installations.

### List of Members

The IrBEA website will list the following information for each member that fulfils the requirement of the Biomass Designers' Register:

- Name of company
- Name of Engineer(s) who pass the above criteria
- Contact details (address, website and phone number)

### A Design Pack

On completion of a design, the designer will produce a design pack that includes (at a minimum) the following:

- Description of basis for boiler sizing
- Drawings
  - o A schematic of the installation detailing connections to the load systems
  - o A layout drawing for the fuel store and boiler room
  - o Plan and elevation drawings of the installation

- Calculations
  - Heat load analysis for the building(s) to be connected
  - Boiler and thermal storage sizing including the expected annual utilisation factor
  - The expected annual energy consumption of the loads and the calculated contribution from the biomass system
  - Fuel store sizing
  - Flue sizing for both the technical and emissions requirements
  - Flue calculation on flue heights
  - Pressurisation system sizing including expansion vessel sizing, design static pressure, expected expansion volume and final working pressure
  - Details of the design flowrates, temperatures and pressures throughout the system
- For projects in the Republic of Ireland
  - A recommendation to the client as to whether the project requires a Project Supervisor for the Design Process (PSDP) as required by the Health and Safety Authority ([www.hsa.ie](http://www.hsa.ie))
  - If a PSDP is required, the name of the PSDP (either an individual or a company) will be listed. The PSDP could be the same entity as the Biomass Designer.
- Planning requirements
  - Any correspondence with the local authority concerning planning matters, particularly fuel
  - delivery access, noise, flue height and emissions
- A declaration as described below

## The Declaration

After completing the design of a biomass installation, the Biomass Designer (the Engineer named on the Biomass Designer Register) will sign a declaration.

The following information will be listed on the declaration:

- Technical Details
  - The size (kWth) of the biomass installation
  - Sometimes designers are asked to design the entire system, on other occasions they are only asked to replace a boiler. However, it is important that a number of elements are included in the overall design, and the design declaration, should confirm which of the following items are included in the design:
    - System to unload the fuel from the delivery vehicles into the fuel store
    - A fuel store
    - A system to transport the fuels (specified above) to the boiler
    - A biomass boiler
    - A buffer tank or thermal store
    - A flue system designed to EN 13384-1
    - Ventilation to the boiler room
    - Back up boiler
    - Integration into an existing or new hydronic system
    - Integration with an existing or new controls system, building management system (BMS) or SCADA system
  - The fuel the installation is designed for, and the specification of acceptable fuel(s). At a minimum the fuel specification should detail:

- List of acceptable fuels (woodchip, wood pellet, other (and if other these should be listed)
  - The maximum and minimum acceptable moisture contents
  - The maximum acceptable particle size
- The type(s) of fuel delivery vehicles that can empty into the fuel store
  - Whether the design requires planning permission. If the Designer does not feel they are competent to confirm whether the design requires planning, this should be stated on the declaration.

## Biomass Installers Register

Biomass Installers may either install a design:

- they have designed themselves, in which case a Design Pack will be prepared (as described in the Section related to the Biomass Designers Register) and handed to the client prior to construction commencing, or
- a design completed by a Designer not part of the Installers company, in which case they will build the installation in accordance with the Design Pack

## Requirements to Join the Biomass Installers Register

To join the biomass installer register, applicants must be a member of IrBEA and provide the following information to IrBEA:

- A list of boilers (make and model) they install, and:
  - o For each boiler under 300kW, evidence that it is EN303-5 certified
  - o For all boilers that they are CE marked
- Evidence from the boiler manufacturer that the installer is an approved supplier/installer of the boiler and information on the areas (Republic of Ireland and/or Northern Ireland) where they are approved to supply/install the boilers
- Have attended a Biomass Designers course run by IrBEA (detailed in the Appendix
- Hold the following insurances
  - Public Liability
  - Employers Liability
- A Tax Clearance Certificate
- Northern Ireland Companies need to be Tax compliant in NI and have Tax Clearance Certificate in Republic of Ireland
- Sign a declaration to confirm that they agree to the rules and criteria for this register

New company to get onto the full register must have an Installer who has worked on 5 biomass installations. They must provide evidence to verify these installations including client reference contact details etc.

Prior to inclusion on the register the company will need to be inspected and signed off by member on the designer register.

## Annual Renewal

On an annual basis, IrBEA will require members of the Biomass Installers Register to provide evidence that they still fulfil the requirements of the Biomass Installers Register.

IrBEA may periodically run additional training events for members of the Biomass Register's. Members of the Registers may be required to attend these training events and/or demonstrate they have attended other training courses related to biomass installations.

## List of Members

The IrBEA website will list the following information for each member that fulfils the requirement of the Biomass Installers Register:

- Name of company
- Contact details (address, website and phone number)
- Make and models of boilers they have agencies to install

## The Declaration

On completion of a biomass installation, biomass installers will sign a declaration on company headed paper to state:

- At the time the declaration is signed, the company fulfils the requirements of the Biomass Installers Register
- The biomass installation was installed in accordance with a biomass design (which was completed by a company on the Biomass Designers Register<sup>2</sup>), except for where:
  - o There is any deviation from the biomass design, this must be clearly stated and agreed with the Engineer who signed off the Biomass Design
- All electrical work:
  - o For installation in the Republic of Ireland was conducted by a Safe Electric Ireland (<https://safeelectric.ie/>) qualified electrician
- The following material was handed over to the client:
  - o As built drawings of the installation
  - o A commissioning certificate for the boiler signed by the individual who did the commissioning (this may be an individual not working directly for the installation company, for example be an individual working for the boiler manufacturer)
  - o A declaration signed by the Electrician (this may be part of the commissioning cert)
  - o A safety file for the project
  - o Specification sheets and operations manuals for the following pieces of equipment
    - Boiler
    - Pumps
    - Fuel supply system(s)
    - Fire safety system
  - o Details of the warranty for each item of equipment installed
- The declaration will only be signed by a Director or Employee of the Installation company. The declaration will clearly state the name of the individual signing the declaration and their role in the installation company.
- The client will be also asked to sign a declaration to confirm that they have been trained in the operation of the boiler by the Installer.

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<sup>2</sup> In some situations, the Design may be produced by the company installing the boiler. However, in this case a Design Pack (as described under the Biomass Designers Register section of this document) should be provided to the client prior to construction commencing.



## Appendix: Contents of Biomass Practitioners Training Course

|           |  |
|-----------|--|
| Session 1 | Introduction to biomass boiler systems, the biomass design process, and biomass boiler types (1 hour)                                    |
| Session 2 | Biomass boiler features, some engineering design fundamentals, biomass fuels and biomass combustion (1¼ hours)                           |
| Session 3 | Analysing boiler houses, biomass boiler operation with buffer vessels & thermal stores, load patterns and heat demand modelling (1 hour) |
| Session 4 | The biomass boiler system sizing tool, biomass boiler sizing and hydronics Part 1 (1¼ hours)   |
| Session 5 | Hydronics Part 2 and biomass flue systems Part 1 (1½ hours)  |
| Session 6 | Biomass emissions, airflow over building and flue design for emissions dispersal (3/4 hour)  |
| Session 7 | Case studies, and biomass fuel storage, delivery & extraction (1 hour)   |
| Session 8 | Biomass electrical power & controls, heat metering and problem solving (1¼ hours)  |