

# RHI Sustainability – Biomass Combustion

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## Introduction

For those biomass boiler owners who have decided to produce their own woodfuel, either just to supply their own needs or also sell it commercially, it is important to make sure that everything in their supply chain fits the RHI sustainability criteria, and probably more importantly they have suitable evidence to prove it. This applies to both those who are just now applying for the RHI and those already long registered. For farmers, producing their own fuel is a sensible choice if they have both the space to store raw material and the woodfuel.

In order to claim the RHI for biomass installations, you have to prove that your fuel meets the RHI "Sustainability Criteria". In reality these are in fact two basic criteria known as the "Greenhouse Gas (GHG) Criteria" – a minimum carbon footprint and the "Land Criteria" – the land criteria are aimed to ensure that all biomass fuels are socially and environmentally sustainable.

### GHG Criteria

The GHG criteria for solid biomass is set at a minimum 60% GHG emission saving relative to EU fossil fuel heat average = **34.8g CO<sub>2</sub>eq/MJ** of heat. There are two available methodologies for calculating the GHG depending on the size of the installation and fuel used;

- Default Value Method – Very simple, as the GHG values of certain fuels are given in the regulations. If your fuel is not listed (including the source of the raw material) then you can't use this method. It usually gives higher values than the actual value method. Not an option for systems over 1MW.
- Actual Value Method – Need to calculate the GHG values for your fuel based on raw materials, cultivation systems (if appropriate), transport distances, processing systems etc. There is a free, rather complex, software tool available to do this <https://www.ofgem.gov.uk/publications-and-updates/uk-solid-and-gaseous-biomass-carbon-calculator>

Unfortunately, the "Default Values" provided in the regulations do not cover chip or pellet made from virgin roundwood, they only refer to products made from forest residues (tops and branches left on the forest floor) or Short Rotation Forestry, neither of which are close to UK roundwood from long rotation forestry. Therefore for most producers in the UK they have to use the actual value method.

### Land Criteria

On a broad level they are the same whether it is timber from the UK or palm oil from far less regulated regions of the world.

For woody biomass, the sustainability criteria are set against those in the *UK Timber Standard* regulations. Under this there is what is often known as the "70:30 threshold" whereby that all of it has to be legal (and be able to prove this) and at least 70% of that from provably sustainable sources. Legal, for most UK forestry timber, generally means a felling licence, Forest Plan or more recently with severe disease outbreaks, Statutory Plant Health Notices (SPHNs) which require the compulsory felling of diseased trees. There are other evidences of legality of trees but these are the most common. Sustainable means fuel sourced from woodland which is managed in accordance with UK Timber Standard, such as Forest Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification (PEFC) certified woodland or woodland with an approved management plan of some kind.

It should be noted that for producers not sourcing 100% sustainable timber, they will need to complete a "mass balance" calculation and provide the method in advance of registering on the RHI. The mass balance approach enables material with differing percentages of

'legal and sustainable' sources and 'legal only' sources to be mixed whilst ensuring the correct accounting and reporting of the 70:30 threshold.

*A quick note on plans: Long Term Forest Plans (LTFF) are generally for forest areas of over 100ha and, when approved, come with felling approval for the first 10 years; a separate felling licence is not required. Woodland Management Plans (WMP) are typically for woods of less than 100ha but do not come with felling approval; although the Forestry Commission approves the WMP, it must be accompanied by a felling licence.*

## Complying with the regulations

There are 2 options for RHI users to prove the fuel meets the RHI requirements;

1. Buy woodfuel from an RHI approved supplier registered on the *Biomass Suppliers List* (BSL). In this case the supplier has already done the required evidencing, therefore the user simply states the BSL number of their supplier.
2. Report directly to Ofgem (only for those in the non-domestic RHI). If you report directly to Ofgem you need to calculate the fuel's GHG every quarter using a rather complex piece of software. Also have access to the required evidence that it meets the land criteria.



Users wishing to produce their own fuel, but with no intention of selling fuel to others, again have 2 Options;

1. The simpler option of registering on the BSL. This carries a fee (£25-£150 a year depending the size of your organisation, timber source and tonnages), but only requires a simple GHG calculation and an update once a year. If your basic supply chain does not change then this is a simple declaration that nothing has changed.
2. Report directly to Ofgem. Again you need to calculate the fuel's GHG every quarter.

For user and producers wishing to sell woodfuel to other RHI users you have to register on the BSL.

The next option depends on where you get your timber from, if it's all coming from your own woodlands – any woodland from which you have a right to harvest timber, through ownership, tenancy or otherwise, and is no more than 50 miles from the sub-1MW boiler – then you can set yourself up as a “self-supplier”, this requires no evidence for either GHG or land criteria, simply evidence that you have the legal right to take the timber e.g. felling licence or Long Term Forest Plan.

If you are buying in any timber, even if topping up your own timber from your own woodland, you are then not a “self-supplier”, thus requiring evidence of both the GHG and land criteria. Depending on whether you report directly to Ofgem or register on the Biomass Suppliers List the process is different, however the evidence required is the same for both.

## Evidence

For woody biomass, evidence and paperwork for the GHG criteria are not usually a problem, land criteria can appear to be more so. It should be pointed out that evidence is only required if/when you are audited, however it is critical that all the evidence is in place at all times, as failure to produce evidence could result in a compliance notice.

### GHG Criteria

For woody biomass, unless you are a very large producer you will most likely have used the simplified carbon calculator as part of the BSL application process as explained in another technical note in this series “*RHI Sustainability - Becoming Biomass Suppliers List (BSL) Accredited*”. No evidence of any of the inputs is required during the application, it is only required at audit.

| Proof required   | Suggested evidence  |
|--|---|
| Distance from woodland to processing site                                  | All delivery notes / invoices with woodland location on it; (grid reference or name that can be found on a map), typical or average distance is fine but err on the high side so that you do not have to enter new GHG calculations each year or quarter. |
| Moisture content of raw material and dried product (only if forced drying) | A log book recording the results of your own moisture tests; any lab test results.  |
| Delivery distance (only if supplying to others)                            | All delivery notes to customers with customer address   |

### Land Criteria

Understandably there is some confusion over the requirements to meet and evidence the land criteria. It is beyond the scope of this note to explain all the different permutations, details and complexities involved, but we will try and cover the most likely situations.

Under the RHI, evidence for woody biomass land criteria is categorised as either;

- **Category A Evidence** – This require you, as a supplier, to be certified with either the Forest Stewardship Council (FSC) or Programme for the Endorsement of Forest Certification (PEFC) . This is an expensive process and only really an option for the very largest forest owners and woodfuel suppliers.
- **Category B Evidence** – You yourself are not FSC or PEFC certified but you only buy FSC or PEFC timber and therefore can complete the intimidatingly titled “Risk Based Regional Assessment” (RBRA). This is the route almost everyone needs to take.

The simplest route to RHI compliance would be to buy 100% UK timber that has full FSC / PEFC / Grown-in-Britain (GiB) Certification, as certification covers both the legality and the sustainability; or an approved Forest Plan. This requires the least paperwork and evidencing. However this is not always possible, especially if you want to take advantage of local timber from a small scale operation.

Remember, you are able to use up to 30% of your woodfuel that is only covered by a felling license (legal only), this may be a possible way to use local timber from small scale operations. The rest (70%) has to have certification, LTFP or felling licence and WMP, approval numbers. But bear in mind that any time you buy any “legal only” timber you will need to have this agreed in advance with OFGEM including a method for doing “mass-balance” calculations.

### Risk Based Regional Assessment (RBRA)

Fortunately the Confederation of Forest Industries (Confor) have produced a template RBRA for UK grown timber which is downloadable from the BSL website. The template has most of the sections for the various evidences as per the UK Timber Standard already completed with only the company details in Section 3, the evidence details in the first part of section 5 and the declaration in section 6 to complete.

In the table in section 5 for most suppliers, sourcing virgin timber or primary processing co-products, the evidence will simply be purchasing 100% FSC/PEFC Timber from a certified supplier or buying timber from a woodland which is covered by an approved management plan. In the evidence box include details that you will check 20% of the certifications, management plans and felling licenses. Certification, plan and felling license numbers can be checked at;

- <https://info.fsc.org/certificate.php>
- <https://www.pefc.org/find-certified/certified-certificates>
- <http://www.cms.forestry.gov.uk/publicRegister/caseSearch.jsf> for checking felling license and plan numbers (if they are not on the online register you will need to contact the relevant Forestry Commission office that issued the license or plan).

If you are not going to be buying 100% sustainable timber, you need to declare this in the RBRA and also include your methodology for doing mass balance calculations. This needs to be agreed in advance either with Ofgem or the BSL depending on your registration route.

More information on the mass balance approach is available at;

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/390147/141222\\_Consignments\\_and\\_Mass\\_Balance\\_Approach\\_-\\_Guidance\\_final.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/390147/141222_Consignments_and_Mass_Balance_Approach_-_Guidance_final.pdf)

## Buying raw material

Different raw materials have different requirements for evidencing

|  |   |   |
|--|---|---|
| • Virgin Timber                                | - | Need full GHG and land criteria   |
| • Primary processing co-products (sawmills)    | - | Need full GHG and land criteria   |
| • Arboricultural arisings (tree surgery waste) | - | Need full GHG, <b>NO</b> land criteria  |
| • Short Rotation Coppice                       | - | Need full GHG and land criteria However different land criteria to other woody biomass as it is treated as an energy crop (Please see our other technical note in this series " <i>RHI Sustainability – Non-woody biomass</i> " for more details on requirements) |
| • Waste Wood                                   | - | Nothing required  |

Therefore if considering buying timber you need to make sure it can meet these evidentiary requirements before you buy it; if it's fully FSC / PEFC / GiB certified, or has a LTFP, then the reference number is all you need. If not, you must be able to obtain the Felling Licence number and the WMP approval number.

Below is a list of examples of the evidence required for the land criteria;

| Proof required       | Suggested evidence  |
|----------------------|---|
| Location of woodland | As per GHG criteria.  |
| Legality             | Felling licence number or FC approved LTFP number or any FSC/PEFC/GiB certification   |
| Sustainability       | Forestry Commission approved LTFP number or WMP number or FSC/PEFC Chain-of-Custody certificate number (" <i>Controlled Wood</i> " or " <i>FSC Mix</i> " certification may not be sufficient by themselves) |

## Timber Delivery Notes

The delivery note or invoice for purchased timber is almost the only evidence you need, as long as it shows the correct details as outlined above. We would suggest you contact your supplier before ordering to ensure as much of the following detail as possible is on the invoices or delivery notes.

- Timber supplier name and address
- Timber supplier FSC/PEFC/GiB number (if relevant)
- Weight
- Confirmation that that particular delivery is from FSC/PEFC certified sources
- Woodland location (woodland name to match that on the felling license/management plan/ FSC/PEFC certificate may do)
- If not FSC/PEFC/GiB certified, then felling license *and* WMP number, or LTFP number

Remember that only up to 30% of your wood-fuel supply documentary evidence can rely on a felling licence alone.

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