**Renewable Heat Incentive (RHI) Fuel Measurement and Sampling (FMS) Questionnaire for biomethane producers (v2.1)**

The FMS process seeks to agree suitable procedures to determine the renewable proportion of biomethane, eligible for RHI payments, as well as to fulfil the sustainability reporting requirements.

Before completing this document, ensure you have read the following guidance documents:

* [Fuel Measurement and Sampling (FMS) Guidance](http://www.ofgem.gov.uk/ndrhi-guidance)
* [Sustainability Self-Reporting Guidance](http://www.ofgem.gov.uk/ndrhi-guidance)

The submission and agreement of this document forms part of the RHI accreditation process for those required to undertake FMS procedures. Accreditation will not be granted unless FMS procedures are agreed.

**Participants accredited before 5 October who need to provide details in relation to sustainability only need to complete sections A, B, C and D. The completed questionnaire should then be submitted as soon as possible.**

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| Sustainability Reporting Requirements | Participants are required to report the sustainability information of biomethane produced, on a consignment basis, from 5 October 2015 onwards. To meet this requirement, you will need to:* Classify your feedstocks into ‘consignments’; and
* Implement a method to track the sustainability information of each consignment where consignments are mixed.
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| Questionnaire Completion | When completing this questionnaire, clearly outline how you will undertake your procedures. The size of the response text box indicates the length of answer expected. There is extra space for your answers at the end of the questionnaire if you need it. When referencing any industry standards include the name, issuing body and reference number of the standard. |
| QuestionnaireSubmission | Your questionnaire will need to be submitted alongside your application in the FMS Submission section of the RHI Register as a PDF document.You may also submit a new or amended questionnaire during your participation on the scheme by going to the FMS Submission section in the RHI Register. Participants accredited before 5 October who need to provide details in relation to sustainability only need to complete sections A, B, C and D. The completed questionnaire should then be submitted as soon as possible. |

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| **Declaration** |
| I can confirm that all the information provided in this document is correct, to the best of my knowledge and belief. I am aware that I need to notify Ofgem where any of the procedures detailed in this document and/or the feedstocks change.Signed by the producer of biomethane for injection or its authorised signatory: |

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| **Section A:** Registration information |
| 1. RHI Number

1. Name of installation *[answer to HA100 of the RHI application]*

1. Maximum initial capacity (m3 per quarter) *[answer to HA140-1 of the RHI Application]*

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| **Section B:** ConsignmentsThis section helps determine whether the feedstocks used are single consignments or a mixture of consignments. Please refer to Chapter 7 of the [Sustainability Self-Reporting Guidance](http://www.ofgem.gov.uk/ndrhi-guidance) before completing this section. |

1. Please list your consignments in the table below.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name and source | Country of origin | Fuel classification | Feedstock type  | Biomass form (solid biomass only) |
| e.g Miscanthus, own farm | e.g. UK | e.g. product | e.g. energy crop (grass) | e.g. bales |
| e.g. Cattle Slurry, own farm | e.g. UK | e.g. waste | e.g. slurry | n/a |
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 *[If you require more space please use an additional sheet]*

1. Have you classified any of your consignments as wastes or residues?

 [ ]  yes *[🡪 answer B3]* [ ]  no *[🡪 go to section C]*

1. Please provide further details of the consignment(s) and the reasoning behind your classification as a ‘residue’ and/ or ‘waste’.

*[If your consignments are already identified in Appendix 2 of the* [*Sustainability Self-Reporting Guidance*](http://www.ofgem.gov.uk/ndrhi-guidance) *then you do not need to provide further details.]*



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| **Section C:** Assessing consignmentsThis section will allow us to assess how you will quantify the consignments of feedstock used. |

 ***C0*** Are any of the consignments listed in **B1** mixed?

[ ]  yes *[🡪 go to section C2]* [ ]  no *[🡪 go to section C1]* [ ]  one consignment only *[🡪 go to Section C1]*

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| **Section C1:** Unmixed consignments |

1. How will the quantity of any consignment(s) used in a quarter be known or measured?



1. How accurate is the equipment used for measuring quantity (as a percentage or using units e.g. ± X% or X kg)? Also outline steps taken to ensure accuracy is maintained, such as calibration undertaken on a periodic basis (including relevant standards this would be conducted to).

*[your response to this question should reflect the size and complexity of your installation]*



1. What evidence will you retain to substantiate the figure for each consignment used per quarter?



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| **Section C2:** Mixed consignmentsFor mixed consignments, we recommend using a mass balance system to determine the proportion of consignments used. Please refer to Chapter 7 of the [Sustainability Self-Reporting Guidance](http://www.ofgem.gov.uk/ndrhi-guidance) before completing this section. |

1. How will the quantity of any consignments used in a quarter be known or measured?



1. Please state which of your consignments are mixed and whether or not the mixing takes place at your site or prior to arriving at your site.



1. Explain how you will use a mass-balance system, including:
* whether you are using a proportionate or non-proportionate mass balance system
* where in the supply chain and/or site the method will be used
* to which feedstock consignments it will apply
* how you will use the system to determine the quantity of each feedstock consignment used in a quarter



1. How accurate is the equipment used for measuring quantity (as a percentage or using units e.g. ± X% or X kg)? Also outline steps taken to ensure accuracy is maintained, such as calibration undertaken on a periodic basis (including relevant standards this would be conducted to).

*[your response to this question should reflect the size and complexity of your installation]*



1. What evidence will you retain to substantiate the figure for each consignment used per quarter?



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| **Section D:** Determining gas yield |

1. How will you quantify the proportion of biomethane produced from each consignment of feedstock?

If you are planning to use Ofgem’s Biogas and Biomethane Apportioning Tool please ensure you include the following information:

* whether or not you are using the data provided in the tool;
* how you have derived the data if you are not using that in the tool.

*[Please note that sites using only one consignment each quarter do not need to answer this question.]*



1. You are required to calculate greenhouse gas emissions based on the net calorific value (NCV) of the biomethane injected (also known as lower heating value (LHV)).

[ ]  I intend to measure the NCV.

[ ]  I intend to convert from gross calorific value (GCV) (also known as higher heating value (HHV)).

Please provide further details of how you intend to convert from GCV to NCV or how you will measure this value.



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| **Section E:** Measuring the energy content of biomethane injected  |

1. How will the volume and gross calorific value (GCV) of the biomethane be measured?



1. How often or over what time period will the biomethane be measured?



1. Is any method of verification of the measurement(s) used? If so, please outline this method below:



1. Please complete the table below:

|  |  |  |
| --- | --- | --- |
| **Type of meter** | **Opening meter reading** | **Date taken** |
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1. Is any method of verification of the measurements listed in ***E4*** used? Please provide details. If you are using a volume flow meter provide details of how you will provide readings at standard temperature and pressure.



**Section F:** Measuring the fossil fuel contamination

1. Are you producing biogas by gasification or pyrolysis?

[ ]  yes *[*🡪 *answer questions F2 to F4]* [ ]  no *[*🡪 *go to section G]*

1. Please provide details of the fossil fuel contaminants of the feedstock (examples of fossil fuel contaminants include plastic, paint, varnish, oil etc.)



1. How will the energy content of the feedstock contaminants be measured and compared to the energy content of the feedstocks as a whole?



1. Is any method of verification of the measurement used? If so please outline this method below:



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| **Section G:** Measuring the energy content of propane  |

1. Are you adding propane?

[ ]  yes *[*🡪 *answer questions G2 to G4]* [ ]  no *[*🡪 *go to section H]*

1. How often or over what time period will the propane be measured?



1. How do you intend to demonstrate the gross calorific value (GCV) of propane?



1. Please complete the table below.

|  |  |  |
| --- | --- | --- |
| **Type of meter (make, model, volume/mass)**  | **Opening meter reading** | **Date taken** |
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1. Is any method of verification of the measurements listed in ***G4*** used? Please provide details. If you are using a volume flow meter provide details of how you will provide readings at standard temperature and pressure.



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| **Section H:** Measuring the heat to be deducted |

1. Where heat from an external source is used at the biogas production plant, and/or to produce biomethane, please explain how this will be measured:



1. Please complete the table below.

|  |  |
| --- | --- |
| **Opening meter readings (kWhth)** | **Date taken** |
|       |       |
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| **Additional information**Please use the space below if you need to add additional information to any of the questions in this document. |



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