

# Annual Sustainability Report 2011-2012

## Report

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### Overview:

Under the provisions of the Renewables Obligation (RO), the Renewables Obligation (Scotland) (ROS) and the Northern Ireland Renewables Obligation (NIRO), generating stations using biomass fuels are required to submit sustainability information to Ofgem. This document summarises the data submitted to us against generation in 2011-12.

## Context

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The Renewables Obligation (RO), the Renewables Obligation (Scotland) (ROS) and the Northern Ireland Renewables Obligation (NIRO) are the main support schemes for renewable electricity projects in the UK.

Generating stations with a declared net capacity (DNC) greater than 50kW using biomass fuel are required to submit an annual sustainability report to Ofgem under Article 54<sup>1</sup> of the Renewables Obligation Order (ROO) 2009 (as amended). The submission of sustainability information by generating stations for the 2011-12 obligation period was subject to the 2011 amendments made to the ROO. These 2011 amendments introduce further criteria to be reported against; namely land use and greenhouse gas (GHG) emissions.

Information received from generating stations in regard to both the Annual Sustainability Report 2011-12 and reporting against the monthly land use and GHG criteria is provided as an associated document to this report.

## Associated documents

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The following associated documents support this publication:

- Sustainability Report on biomass fuelled generating stations for 2011-12 obligation period dataset<sup>2</sup>
- [Sustainability Report on biomass fuelled generating stations for 2010-11 obligation period](#) and accompanying dataset<sup>3</sup>
- [Sustainability Report on biomass fuelled generating stations for 2009-10 obligation period](#)<sup>4</sup>
- [Renewables Obligation Order 2009 \(as amended\) and 2010 and 2011 amendment Orders](#)<sup>5</sup>
- [Renewables Obligation: Sustainability criteria for bioliquids](#)<sup>6</sup>
- [Renewables Obligation: Sustainability Criteria for Solid and Gaseous Biomass for Generators \(greater than 50 kW\)](#)<sup>7</sup>
- [Renewables Obligation: Fuel measurement and sampling guidance](#)<sup>8</sup>

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<sup>1</sup> Article 54 of the (Renewables Obligation Scotland) Order 2009 (as amended) and Article 46 of the Renewables Obligation Order (Northern Ireland) 2009 (as amended) also refer

<sup>2</sup> Published as an associated document to this report.

<sup>3</sup><http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=318&refer=Sustainability/Environment/RenewablObl/FuelledStations>

<sup>4</sup><http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=248&refer=Sustainability/Environment/RenewablObl/FuelledStations>

<sup>5</sup> [www.legislation.gov.uk](http://www.legislation.gov.uk)

<sup>6</sup><http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=327&refer=Sustainability/Environment/RenewablObl/FuelledStations>

<sup>7</sup><http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=329&refer=Sustainability/Environment/RenewablObl/FuelledStations>

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<sup>8</sup><http://www.ofgem.gov.uk/Pages/MoreInformation.aspx?docid=310&refer=Sustainability/Environment/RenewablObl/FuelledStations> – Chapter 4. 'Sustainability reporting'

# 1. Introduction

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## Chapter Summary

This section provides background on the sustainability criteria requirements of the Renewables Obligation Order (ROO) 2009 (as amended).

## Legislative Context

- 1.1. In 2009 the Renewables Obligation Order (ROO) introduced the requirement for generating stations using biomass fuels to report sustainability information to Ofgem.
- 1.2. All generating stations with a declared net capacity greater than 50kW which generate electricity (wholly or partly) from biomass are required to submit an annual sustainability report to Ofgem under Article 54<sup>9</sup> of the ROO 2009 (as amended). Operators are directed to provide Ofgem with information on each consignment of fuel used in the relevant obligation period.
- 1.3. For each consignment of biomass, operators are required to report on:
  - Biomass type
  - Biomass form
  - Quantity of biomass
  - Whether the biomass was a by-product of a process
  - The country of origin if plant or plant-derived matter
  - The country of purchase if the country of origin is not known, or if the biomass is not plant or derived from plant matter
  - The proportion of the consignment that was energy crop
  - Whether the biomass consignment was acquired under an environmental quality assurance scheme
  - The use of the land on which the plant matter or plant-derived matter was grown since 30 November 2005.
- 1.4. From April 2011, generating stations using waste, biomass wholly derived from waste, landfill gas or sewage gas are exempt from this requirement. As

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<sup>9</sup> Article 54 of the (Renewables Obligation Scotland) Order 2009 (as amended) and Article 46 of the Renewables Obligation Order (Northern Ireland) 2009 (as amended) also refer

such, generating stations were not required to submit information in 2011-12 for fuels that fell into these categories.

- 1.5. Additional informational requirements were included in the 2011 amendments to the ROO that differ for stations using solid and gaseous biomass from stations using bioliquids. These are set out in more detail below.

### Additional Reporting - Solid and Gaseous Biomass

- 1.6. The 2011 amendments to the ROO introduced further criteria to be reported against. This requirement is mandatory for all generating stations using solid and gaseous biomass with a capacity above 50kW.
- 1.7. The information is provided as part of the station's monthly output data submission via the Ofgem Renewables and CHP Register<sup>10</sup>. Generators are not required to report annual figures in addition to the monthly figures already provided throughout the obligation year. Instead, Ofgem sought written confirmation from each operator at the end of the obligation year to confirm that they are satisfied with the sustainability data they have provided throughout the year, on a monthly basis.
- 1.8. The sustainability criteria for solid and gaseous biomass, are:
  - **Land criteria:** relating to the type of land on which biomass produced was cultivated in reference to January 2008
  - **GHG emissions criteria:** relating to the GHG emissions from the use of the biomass to generate one mega joule of electricity. For the operator to meet the GHG criteria, the emissions associated with the biomass should be less than or equal to 79.2g CO<sub>2eq</sub>/MJ electricity.
- 1.9. The provision to provide information on the land criteria and the GHG criteria does not apply to a generating station using solid or gaseous biomass that is waste or wholly derived from waste.
- 1.10. The issuance of ROCs for electricity generated from solid and gaseous biomass fuels is not currently linked to the fuels meeting the sustainability criteria. A generator can therefore report that the fuel does not meet the criteria, or that they do not know if it does meet the criteria, and still be eligible for ROCs.
- 1.11. Government has proposed that the electricity generated from solid and gaseous biomass fuels will need to meet the sustainability criteria in future to be eligible to receive ROCs.

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<sup>10</sup> <http://www.ofgem.gov.uk/Sustainability/Environment/RCHPreg/Pages/RCHPreg.aspx>

## Additional Reporting – Bioliquids

- 1.12. From April 2011, further criteria were also introduced for all generating stations using bioliquid fuels. This information is provided as part of the station's monthly output data submission via the Ofgem Renewables and CHP Register. The sustainability criteria are:
- **Land criteria:** relating to the type of land on which biomass used to produce bioliquid was cultivated in reference to January 2008
  - **GHG emissions criteria:** the operator is required to enter the percentage GHG emission savings from the use of the bioliquid in comparison to a fossil fuel comparator. Unless exempt from the requirement<sup>11</sup>, Bioliquids must achieve at least a 35% GHG emissions saving.
- 1.13. Bioliquids are considered to be exempt from the land criteria if they were produced from biomaterial that was waste or residue (other than residue from agriculture, aquaculture, forestry or fisheries). In addition, materials that are wastes, processing residues or residues from agriculture are able to claim zero emissions up to the process of collection for the purposes of calculating GHG emissions.
- 1.14. No ROCs are issued to any generating station using bioliquids that reports 'unknown' or does not meet the land and GHG criteria.
- 1.15. All generating stations using bioliquid fuels are also required to provide Ofgem with an Annual Bioliquid Sustainability Audit report by the 31 May immediately following the obligation period. This report, produced by an independent auditor, verifies that the generator's data and systems for demonstrating compliance with the sustainability criteria are accurate, reliable and protected against fraud.

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<sup>11</sup> See Chapter 5 of the [Renewables Obligation: Sustainability criteria for bioliquids](#), available on the Ofgem website

## 2. Year of Sustainability

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### Chapter Summary

This section collates selected Annual Sustainability Report information provided to us by generators through the 2011-12 obligation period.

- 2.1. The figures reported below and the published sustainability report dataset are based on information as reported by participants. The legislation sets out that the required information, as detailed within Article 54, must be provided to the best of an operator's knowledge and belief. This includes the information provided annually as well as the information reported against the land and GHG criteria on a monthly basis for solid and gaseous biomass.
- 2.2. Whilst Ofgem has reviewed these data to ensure the questions were answered as required by legislation, they have not been verified by Ofgem.
- 2.3. Stations using bioliquids and reporting against the land use and GHG criteria have been independently verified by a third party auditor as part of their Annual Bioliquid Sustainability Audit Report. Ofgem are continuing to work with these operators to ensure their reports comply with the requirements of the legislation. As such, the data provided in the associated dataset may be subject to change.
- 2.4. Furthermore, Ofgem do not seek to pass judgement on the sustainability of fuels or an organisation in this 2011-12 Annual Sustainability Report.
- 2.5. The information used in the Annual Sustainability Report 2011-12 is provided from all generating stations that have reported in 2011-12, including those in which ROCs are yet to be issued. It should be noted that all of the information provided in this report is subject to change.

### Waste Exemptions: Data Considerations

- 2.6. Due to the aforementioned 2011 amendments, generators using biomass that is waste or wholly derived from waste were not required to provide information in 2011-12 for fuels that fell into these categories. Generating stations using a blended fuel which consisted in part of an exempted material, were only required to provide information on the on the non-exempt element of the blend.
- 2.7. As a result of these amendments, the data shown in the accompanying data set are not representative of all of the biomass used in the obligation period.

- 2.8. Furthermore, it is not possible to directly compare data provided for the 2011-12 Annual Sustainability Report against that provided in previous reporting periods, due to differing reporting requirements.
- 2.9. For example, in the 2011-12 period, the total amount of solid biomass and energy crop reported was 3.6 million tonnes, compared to 5 million tonnes in the 2010-11 period. This could be interpreted as an overall reduction in the amount of biomass used to generate electricity. However, it is important to note that the 3.6 million tonnes reported does not include biomass that is waste or wholly derived from waste. Solid Biomass reported as waste or wholly derived of waste accounted for over 1.7 million tonnes in the 2010-11 period.

### **Land Use and GHG Criteria: Data Considerations**

- 2.10. When reporting against the land use and GHG criteria, the legislation requires generating stations using solid and gaseous biomass to comment on the reasons for selecting 'Unknown' with regard to whether the biomass met the criteria, or if the biomass used does not meet the criteria. This information is provided via a free text box.
- 2.11. In some instances generating stations that have met the criteria or are using a bioliquid have reported a comment within this box. Whilst this was not a legislative requirement, Ofgem have left these comments in the attached data set.



## Overview of Sustainability Information

- 2.12. The figures provided within this section have not been verified by Ofgem and are a summary of information supplied by generating stations. As outlined in Chapters 1 and 2 of this report, none of the information provided below has been verified by Ofgem and is reported as submitted. Please note that the figures provided below have been subject to rounding.
- 2.13. As there was no requirement to provide information to Ofgem where the biomass is waste or wholly derived from waste, all data displayed below, with the exception of that provided for land and GHG criteria, are based on biomass that does not fall within these categories. As such, the figures are not representative of all biomass use under the RO for 2011-12.
- 2.14. Data displayed in blue below is sourced from the Annual Sustainability Report. Data sourced from monthly land use and GHG criteria reporting is displayed in purple.

**3.6m**

Tonnes of solid biomass & energy crop reported

**27.2m**

Litres of bioliquid consumed

**100%**

British Isle sourced energy crops

**6.3m**

Cubic metres of biogas from anaerobic digestion produced and used

**72%**

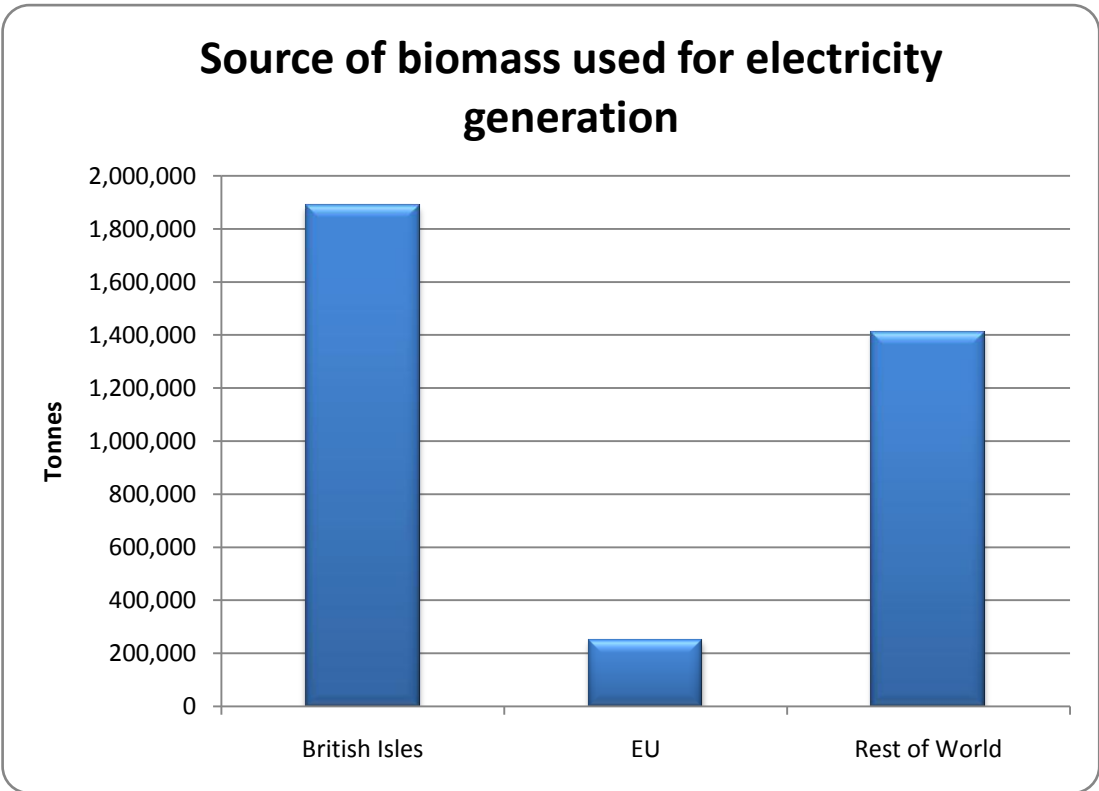
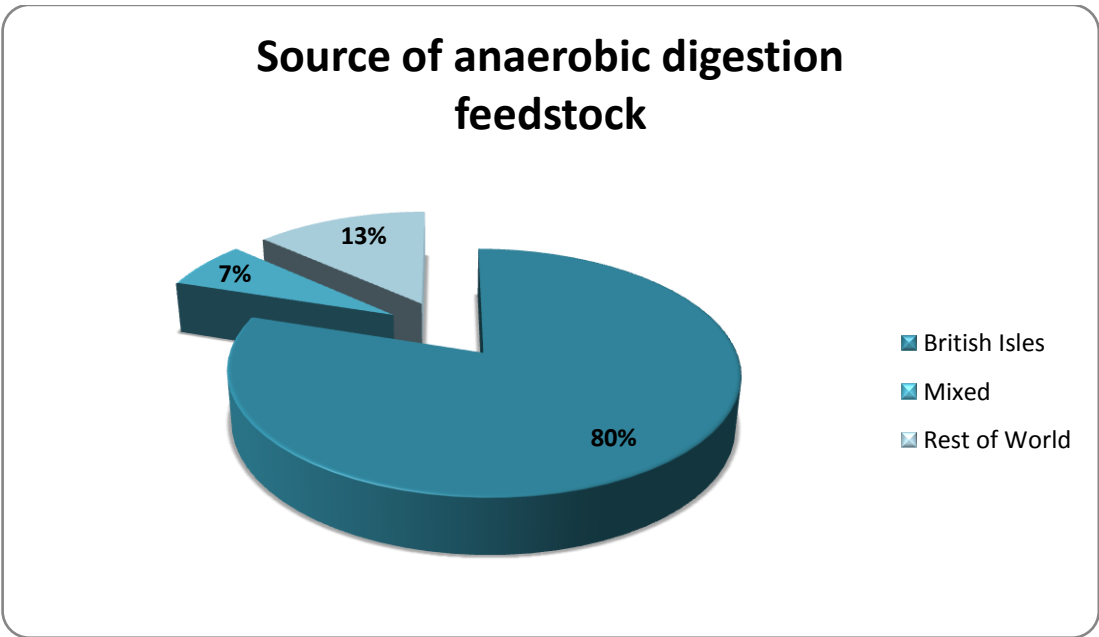
Of submissions from bioliquid stations reported exempt from land use criteria

**28%**

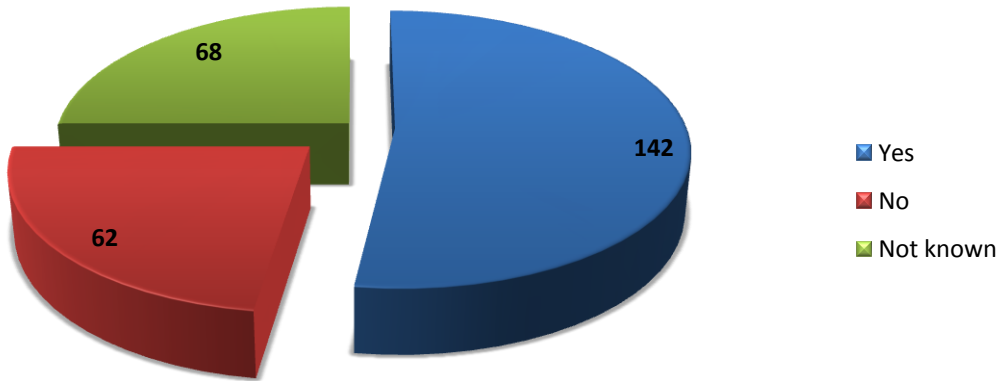
Of submissions from bioliquid stations reporting exempt from GHG criteria



### Graphical Analysis

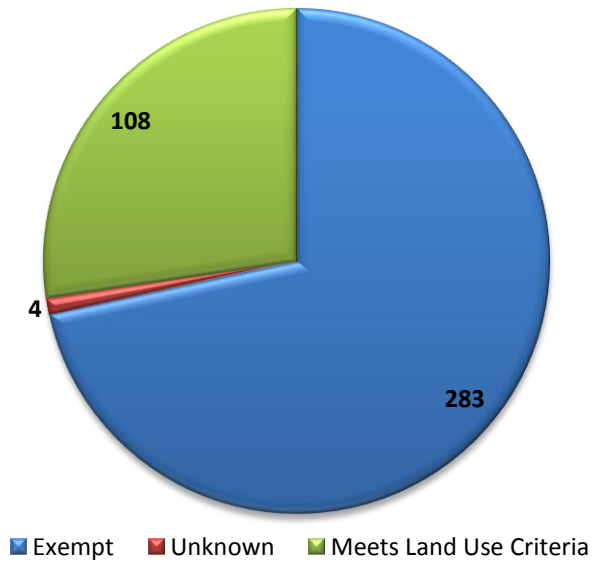


### Feedstock responses sourced using recognised environmental quality assurance scheme

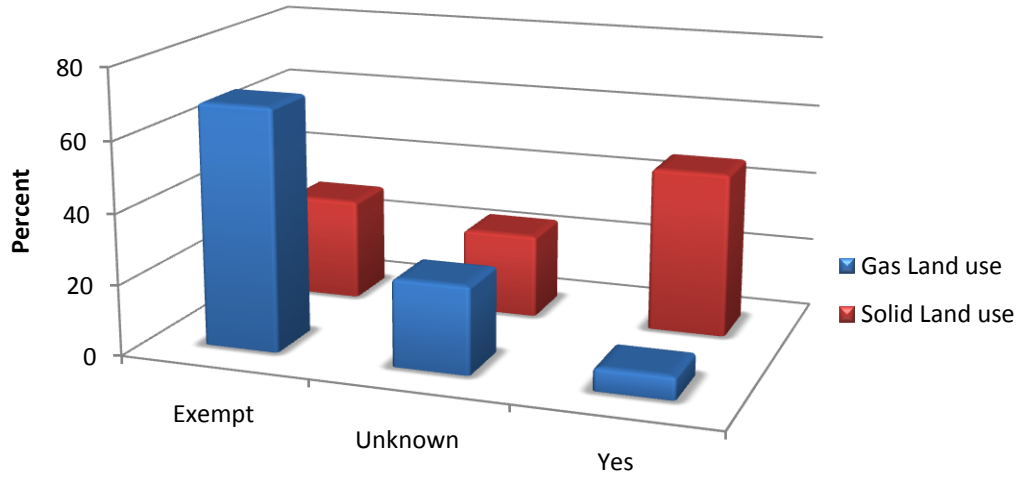


### Land Use and GHG

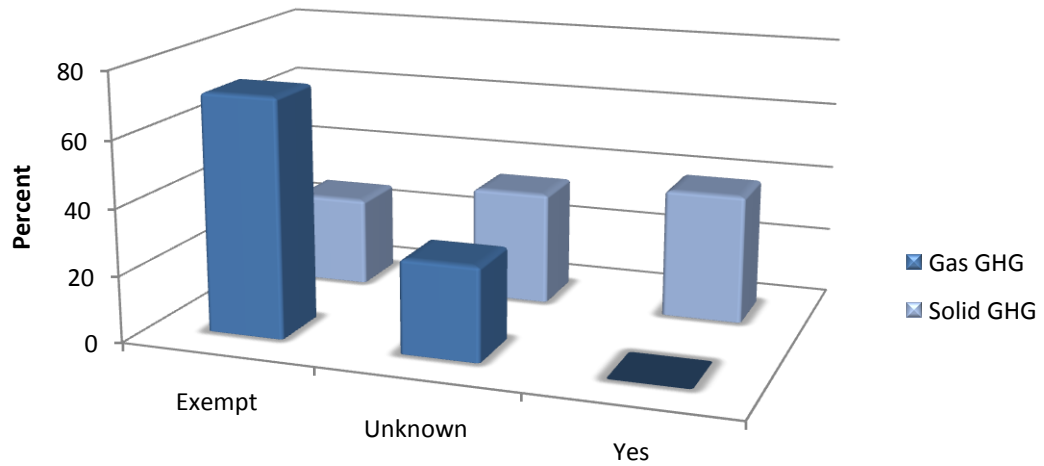
### Summary of responses for bioliquid fuels: land use criteria



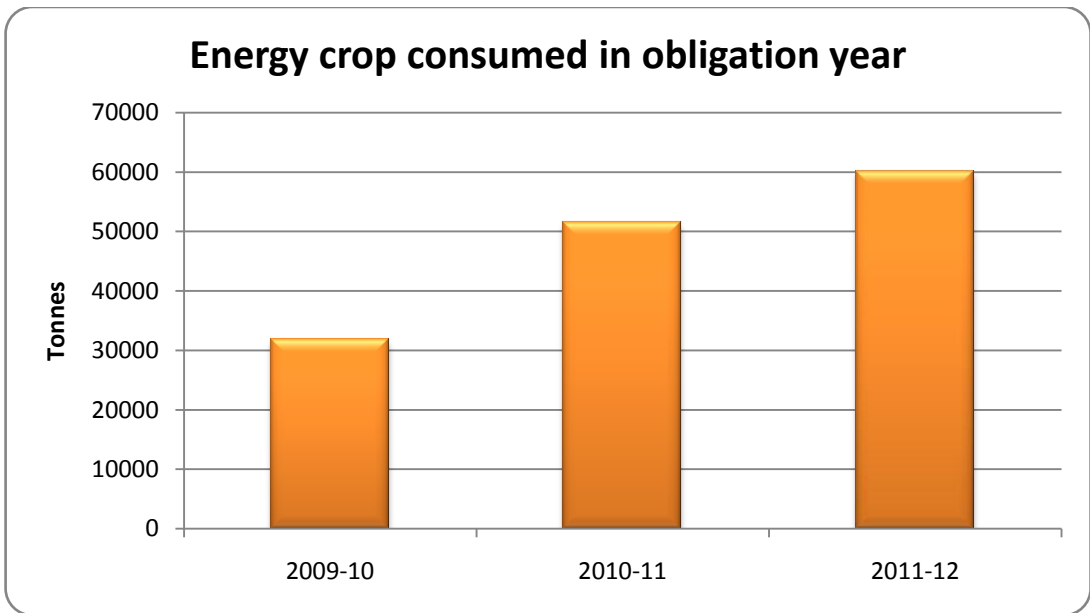
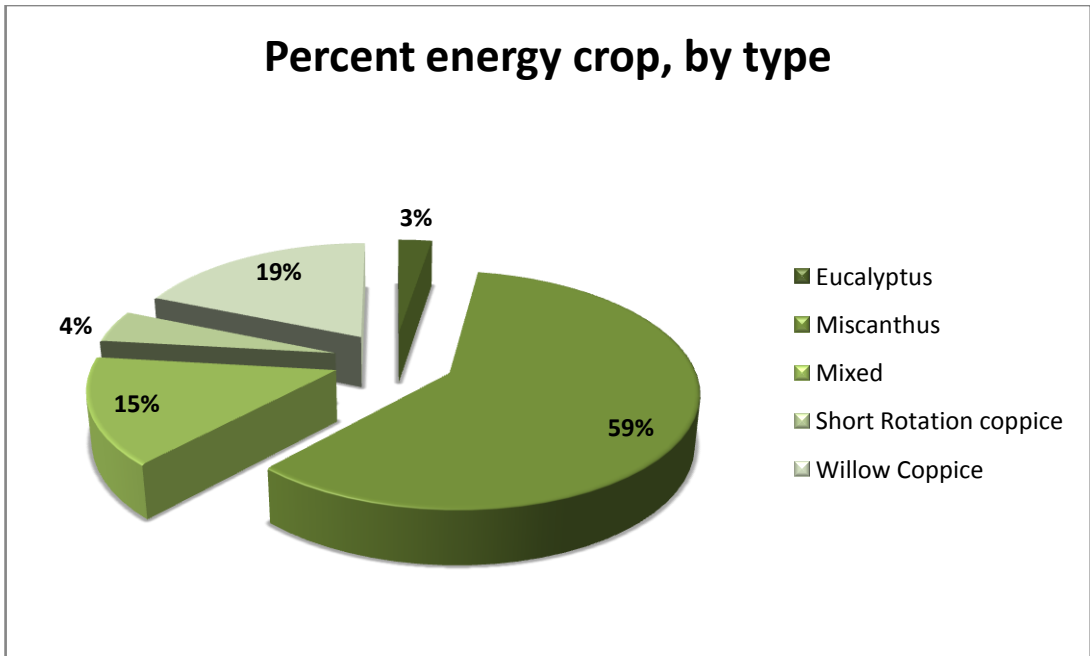
### Monthly land use response for solid and gaseous biomass



### Monthly GHG response for solid and gaseous biomass



## Energy Crops <sup>12</sup>



<sup>12</sup> No energy crops have been reported as a waste. Since the 2011 waste exemptions do not apply, it is possible to compare energy crop usage against previous reporting periods. Where reference to 'energy crop' is used, this refers to the definition of energy crop as per the ROO

## 3. Closing comments

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- 3.1. Ofgem continues to work closely with industry to provide participants with key advice on the nature and format of the information required as set out by legislation.
- 3.2. Future amendments to the Annual Sustainability Report requirements will continue to be incorporated in future reports.