

Renewables Obligation (RO)

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Renewables Obligation: Sustainability Reporting

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Overview

This document is for operators of generating stations using solid biomass, biogas or bioliquids to generate electricity, and their auditors. It explains how to comply with sustainability reporting requirements under the Renewables Obligation and is effective from 1 December 2015 in England, Scotland and Wales and 1 March 2016 for Northern Ireland. It is not a legal guide.

This document was updated to allow for changes to the Renewable Obligation Orders from 1 January 2018.

Context

The Renewables Obligation (RO), the Renewables Obligation (Scotland) (ROS) and the Northern Ireland Renewables Obligation (NIRO) are designed to incentivise large-scale renewable electricity generation in the UK. This is to help the UK meet its target 15 per cent of energy to come from renewable sources by 2020. The respective schemes are administered by the Gas and Electricity Markets Authority (the Authority), whose day-to-day functions are performed by Ofgem. The scheme puts an obligation on licensed electricity suppliers in England and Wales, Scotland and Northern Ireland to acquire an increasing proportion of electricity from renewable sources.

In 2009, the European Commission introduced a comprehensive and binding sustainability scheme for bioliquids. Under the European Renewable Energy Directive (RED),¹ operators using bioliquids must meet specified sustainability criteria to be eligible for support under national incentive schemes. The EC also committed to considering solid biomass and biogas sustainability and published a paper with recommendations member states should follow if they opted to implement sustainability criteria.² The UK government transposed the bioliquid sustainability requirements of the Renewable Energy Directive as well as the solid biomass and biogas recommendations into the RO on 1 April 2011.

In 2013, the Department of Energy and Climate Change (DECC) consulted on further amendments to the RO sustainability criteria for implementation from 1 April 2014. They mainly affected the sustainability criteria and related reporting requirements for generating stations using solid biomass and biogas. In 2015, the Renewables Obligation Order was consolidated and the requirement for solid biomass and biogas stations to meet the sustainability criteria in order to receive support under the scheme was introduced. In Scotland and Northern Ireland the requirement for solid biomass and biogas stations to meet the sustainability criteria was introduced in an amendment Order. The RO and ROS Orders came into effect on 1 December 2015 and the NIRO Order came into effect on 1 March 2016.

In 2017, the Department for Business, Energy and Industrial Strategy (BEIS) [consulted](#) on implementation of the European Union's new sustainability requirements. This was for bioliquids used for electricity generation under the RO, and taking on board new definitions for

¹ Available at <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32009L0028&from=EN>

² Available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2010:0011:FIN:EN:PDF>

waste and processing residues that apply to bioliquids, and solids and gaseous biomass, for implementation from 1 January 2018.

This guidance describes the sustainability criteria for solid biomass, biogas and bioliquid fuels in England, Wales, Scotland and Northern Ireland.

Associated documents

Legislation

Renewables Obligation Order 2015 (as amended), Renewables Obligation (Scotland) Order 2009 (as amended) and Renewables Obligation Order (Northern Ireland) 2009 (as amended): www.legislation.gov.uk

Renewable Energy Directive (2009/28/EC):

<http://eurlex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:en:PDF>

Guidance

All guidance is available at www.ofgem.gov.uk

- Renewables Obligation: Sustainability Criteria Guidance
- Renewables Obligation: Fuel Measurement and Sampling Guidance
- Renewables Obligation: Biodiesel and Fossil Derived Bioliquids Guidance
- Renewables Obligation: Guidance for Generators
- Renewables Obligation and Feed-in Tariffs: Fuel Classification Flow Diagram
- Renewables and CHP Register User Guide
- Renewable Obligation: Annual Sustainability Template

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Executive summary

This document is guidance on the reporting requirements for operators of generating stations, independent auditors and other interested parties. It includes information on monthly reporting, profiling data and the annual sustainability audit report to be submitted under the requirements of the Renewables Obligation (RO).

It aims to help fuel burning electricity operators and others by describing how to report against and verify that they are complying with the RO sustainability criteria. Operators of all bioliquid stations, and solid biomass and/or biogas stations $\geq 1\text{MW}$ will report each month on whether the sustainability criteria have been met, as part of their certificate claims under the scheme. Operators will also have to provide further information at the end of each obligation year. There is another guidance document (RO: Sustainability Criteria Guidance) that explains more about the sustainability criteria, you can find more details about it in the Associated Document section.

The RO requires the annual sustainability audit report to verify the information provided monthly. This report must be prepared to an adequate standard, being International Standard on Assurance Engagements (ISAE) 3000 (revised) or equivalent. There is some background information to ISAE 3000 (revised) in this document. The RO also includes specific points to address as part of the audit. These are also described in this document.

This document provides an overview and gives examples of what the operator and their appointed auditor will need to do. The data and the way the operator produces the sustainability information reported to Ofgem are all subject to verification.

We do not participate in the verification, so we depend on the audit report to give us assurance that the operators have reported correctly. The outcome of an audit report determines whether we are satisfied that ROCs should have been issued on the electricity generated from the fuel(s) used. This document indicates what format the report must be in and what it should include so that it meets the auditing requirements.

The RO also requires generators to submit annual profiling information. This document explains what is required, how to submit this and how this information will be used.

This guidance has been specifically created for the RO. It is for guidance only and is not a legal guide.

1. Introduction

Chapter summary

This chapter explains some of the common terminology used in this document. You can also find out where to direct queries.

- 1.1. Some areas of the legislation are prescriptive, others give us discretion. Where the legislation is prescriptive, this guidance is intended to help operators of generating stations and verifiers understand what we require. Where the legislation gives us discretion, the document explains how we might exercise that discretion. It also explains what we need, practically, from operators of generating stations and auditors so they can meet these requirements.
- 1.2. If anyone other than operators are involved in the RO (for example the auditor appointed to do the annual sustainability audit), the operator of the generating station is responsible for distributing the guidance to them.
- 1.3. This document cannot anticipate every scenario which may arise. If there is a situation not addressed in this guidance, we will adopt an approach consistent with legislation.
- 1.4. This is a guidance document only. It's the operator's responsibility to be aware of the requirements of the Orders. This document is not intended as legal advice on how to interpret the Orders. Operators should seek their own technical or legal support if they need to.
- 1.5. This is a working document and we might update it from time to time. It should be read in conjunction with other guidance documents listed in the Associated Documents section, and the relevant legislation. Any separate guidance published in addition to this document will be posted on our website.³

Terminology

- 1.6. The document refers to the Renewables Obligation Order 2015 (as amended), the Renewables Obligation (Scotland) Order 2009 (as amended) and the Renewables Obligation Order (Northern Ireland) 2009 (as amended). Collectively these are referred to as 'the Orders'.
- 1.7. Unless apparent from the context, where used in this document, the term "RO" refers to the Renewables Obligation, the Renewables Obligation (Scotland) and the Northern Ireland Renewables Obligation (NIRO). The term "ROCs" refers to Renewable Obligation Certificates (ROCs), Scottish Renewables Obligation Certificates (SROCs) and Northern Ireland Renewables Obligation Certificates (NIROCs).
- 1.8. "Ofgem", "us", "our" and "we" are used interchangeably when referring to the exercise of the Authority's powers and functions under the Orders. The term "the Act" refers to the

³ <https://www.ofgem.gov.uk/environmental-programmes/renewables-obligation-ro/information-generators/biomass-sustainability>

Electricity Act 1989. For more information on Ofgem's role as the RO administrator please refer to Appendix 1.

1.9. Where the term "biomass" is used in this document it refers to solid, liquid and gaseous states. Where a distinction needs to be made the terms "bioliquid", "solid biomass" and "biogas" will be used.

1.10. The terms "auditor" and "verifier" are used interchangeably throughout this document. The terminology within ISAE 3000 (revised) refers to this party as 'the practitioner'. The terms "audit", "verification" and "engagement" are also used interchangeably.

Queries

1.11. If you have any queries about this document, send them to us using the details on the front of this document.

1.12. Email all queries about our functions under the Orders to fuellingandsustainability@ofgem.gov.uk. Or you can write to the Fuelling and Sustainability Administrator, Ofgem, 9 Millbank, London, SW1P 3GE.

1.13. Any queries about changes to the ROO for England and Wales and wider policy should be directed to the Department for Business, Energy and Industrial Strategy (BEIS). Contact details are at www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy. For the ROS and NIRO, contact details are at www.scotland.gov.uk and www.economy-ni.gov.uk.

2. Overview of the reporting requirements

Chapter summary

The Orders require certain generating stations to report against the sustainability criteria. This chapter provides an overview of the information required and what needs to be reported.

2.1 Operators of generating stations using biomass are required to report sustainability information, unless they:

- use sewage gas, landfill gas or municipal waste to generate electricity,⁴
- use solid biomass or biogas, and have a declared net capacity (DNC) of $\leq 50\text{kW}$ (ie microgenerators), or
- use solid biomass or biogas which does not meet the definition of biomass (ie biogenic content is $< 90\%$).⁵

2.2 Operators who are required to report against the sustainability criteria must do so per consignment of biomass. Figure 1 summarises the considerations that must be given to each consignment of biomass. Further information on fuel classification, land criteria, Greenhouse Gas (GHG) criteria and mass balance can be found in our RO:Sustainability Criteria guidance.

2.3 Additionally, for generating stations using bioliquids, and stations with a Total Installed Capacity (TIC) $\geq 1\text{MW}$ using solid biomass and/or biogas, meeting the sustainability criteria and having the evidence to demonstrate compliance is a condition for receiving ROCs. It is therefore important operators understand what the sustainability criteria are and how they can be complied with.

2.4 A summary of what needs to be reported and whether it links to ROC issue is set out in Table 1.

⁴ Note that there are other exemptions to the sustainability criteria but some reporting is still required each month and/or year.

⁵ Operators using bioliquids which do not meet the definition of biomass are required to fulfil some sustainability reporting requirements.

Figure 1: Overview of sustainability reporting considerations

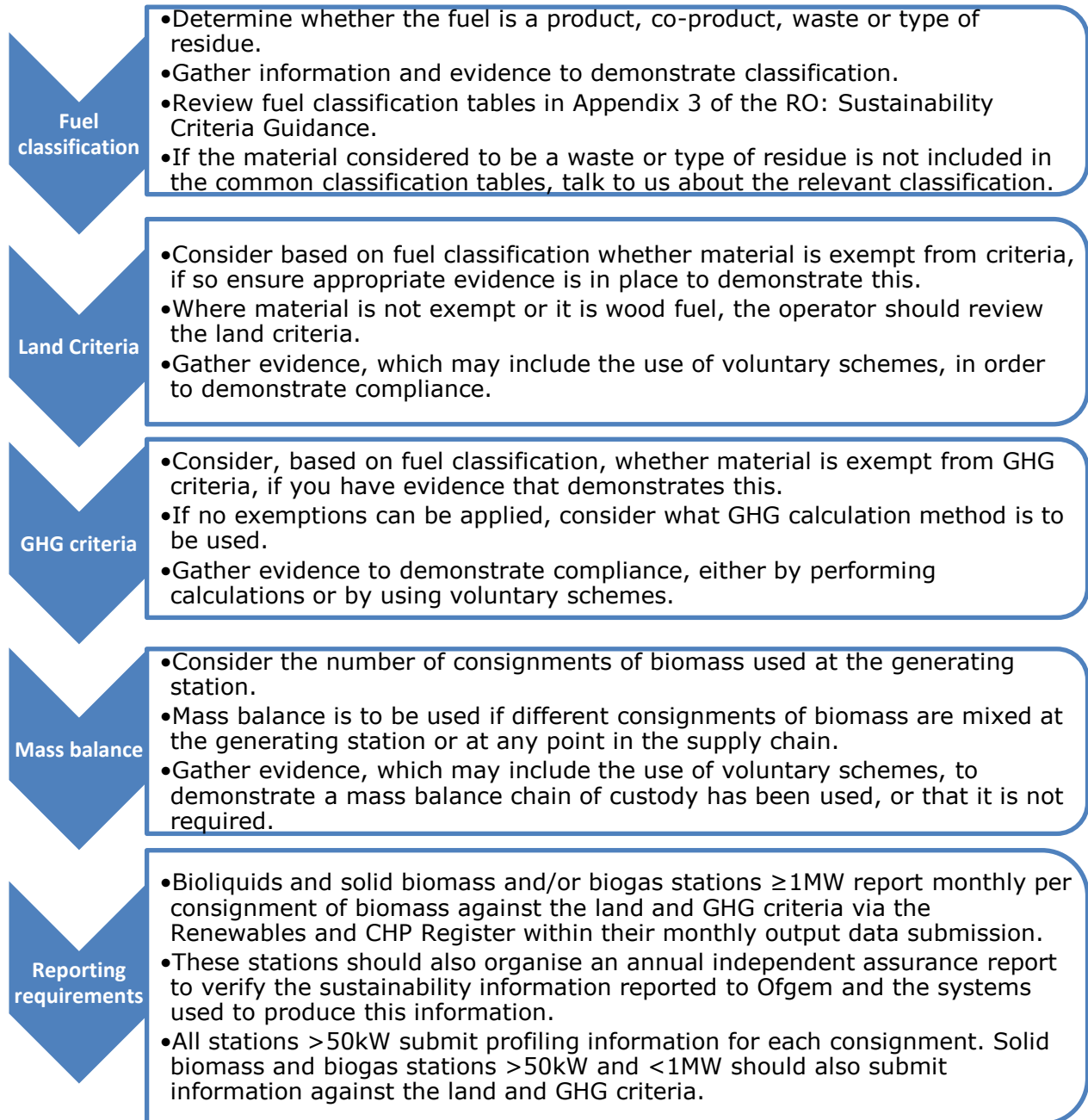


Table 1: Summary of sustainability reporting requirements

Fuel Type	Capacity (kW)	Monthly Reporting	Annual Reporting: Profiling data	Annual Reporting: Audit report	Link to ROC issue
Bioliquid	≤50 DNC	Yes	No	Yes	Yes
	>50 DNC- <1000 TIC	Yes	Yes	Yes	Yes
	≥1000 TIC	Yes	Yes	Yes	Yes
Solid Biomass or Biogas	≤50 DNC	No	No	No	No
	>50 DNC- <1000 TIC	No	Yes	No	No
	≥1000 TIC	Yes	Yes	Yes	Yes

Reporting deadlines

2.5 For monthly reporting, operators should provide information to us before the end of the second month following the month of generation. For example, if the month of generation was October 2017, data should be submitted by 31 December 2017.

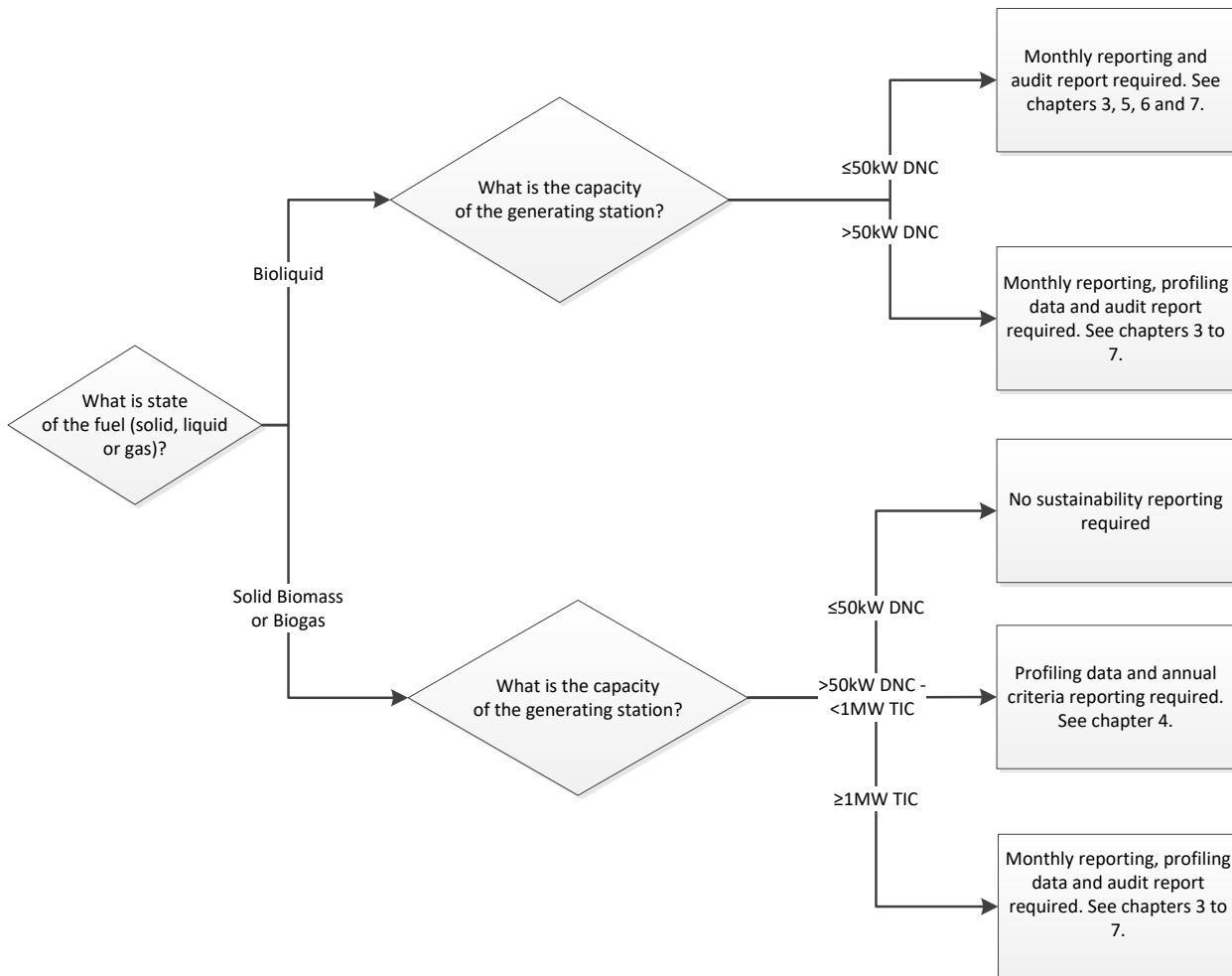
2.6 For annual reporting (audit report and/or profiling data), operators should provide information by these deadlines:

- Bioliquid fuels: 31 May immediately after the end of the obligation period which it covers.
- Solid biomass or biogas fuels: 30 June immediately after the end of the obligation period which it covers.
- Mixture of bioliquid and solid biomass and/or biogas fuels: 31 May immediately after the end of the obligation period which it covers.

2.7 If the annual sustainability information is not provided by the deadline, or is either incomplete or unsatisfactory, Ofgem will postpone issuing ROCs, up to the number of ROCs associated with the relevant obligation period. These ROCs will remain held until we have received and accepted the annual information. Please see Table 1 above for more information on the requirements of your station.

2.8 This guidance has chapters relating to the separate requirements. What information operators are required to report and when, depends on their size and fuel type. Please see Figure 2 below to identify the chapters relevant to you.

Figure 2: Overview of sustainability reporting



Information for auditors

2.9 Operators of all bioliiquid stations and solid biomass and/or biogas stations $\geq 1\text{MW}$ will report each month on whether the sustainability criteria have been met. Additionally, these operators will have to provide an annual sustainability audit report in line with the requirements of the legislation.

2.10 It is the operators responsibility to appoint an auditor and to submit the audit report to Ofgem. It is the auditor's responsibility to do the assurance and complete the written report in accordance with ISAE 3000 (revised). It is the responsibility of both the operator and auditor to understand the requirements and the information that needs to be verified.

2.11 This guidance will provide auditors with information on what the operator reports to us and what is required to be verified. It also provides information on ISAE 3000 (revised) and the format of the audit report. It should be read in conjunction with the RO: Sustainability Criteria guidance.

3. Monthly reporting

Chapter summary

The Orders require bioliquids and generating stations $\geq 1\text{MW}$ TIC using solid biomass and/or biogas fuels to provide information on the sustainability criteria monthly. This chapter provides information on these requirements and how they are reported on the Renewables and CHP Register.

3.1 For generating stations using bioliquids and stations with a TIC $\geq 1\text{MW}$ using solid biomass and biogas, meeting the sustainability criteria and having the evidence to demonstrate compliance is a condition for receiving ROCs.

3.2 As part of each monthly output data submission, the operator of the generating station must enter information about the land criteria and GHG criteria for biomass consignments used in the month. For each consignment, the operator will need to put in the following information:

- Land criteria - The operator must confirm whether the biomass has met the land criteria by selecting 'yes' or 'no'. If the biomass is exempt from the criteria the operator of a generating station can select 'exempt'. If the operator does not know whether the biomass meets the land criteria, they can select 'unknown'.
- GHG criteria – The operator must enter the GHG emission figure. For bioliquids this is reported as a GHG percentage saving against the fossil fuel comparator. For solid biomass and biogas this is reported in gGHG/MJ electricity. If the biomass is exempt from the GHG criteria, the operator can select 'exempt'. If the GHG emission figure is not known, the operator can select 'unknown'. Where a GHG emission figure is entered the system will determine if the GHG criteria are met by reviewing the figure against the relevant GHG threshold. For bioliquids only, the operator must select a date from the drop-down options for 'Installation bioliquid production date' of either 'Before 6 October 2015' or 'On or after 6 October 2015'. This should reflect the date that the installation that produced the bioliquid **first** started production of liquid fuel from biomaterial. This covers the production of transport biofuel and/or bioliquids. The GHG threshold for bioliquids is determined by the 'installation bioliquid production date'. For more information on the GHG thresholds, please see the RO Sustainability Criteria Guidance, Chapter 5

3.3 If the operator has not shown that they have met the land and GHG criteria for a consignment of fuel, no ROCs will be issued on the electricity generated from that consignment in that month.⁶ This also means that if the option 'unknown' is selected for the land and/or the GHG criteria for the fuel, the operator will not have demonstrated that they meet the sustainability criteria. The fuel therefore will be treated as not having met the sustainability criteria and so will not be eligible for ROCs.

3.4 It is this information reported monthly that forms the basis of the annual sustainability audit report. No further information or evidence needs to be provided to us on the

⁶ Article 61 and 63 of the ROO and Article 22A and 22ZA of the ROS and NIRO Orders.

sustainability criteria each month. The evidence, however, will need to be retained for the annual sustainability audit report. Further information on this can be found in chapters 5 to 7.

3.5 Figure 3 below provides a screenshot of how the sustainability information will be reported to us as part as the monthly submission on the Renewables and CHP Register.

Solid biomass/biogas stations <1MW

3.6 As stated in chapter 2, operators of generating stations using solid biomass and biogas which have a TIC <1MW are not required to report against the sustainability criteria monthly. When making their ROC claim each month, these sustainability fields (as shown in Figure 3) will be 'greyed out'.

3.7 Instead these operators will report against the criteria each year as part of their profiling data (see chapter 4 for more information). Those stations with a DNC $\leq 50\text{kW}$ are exempt from any sustainability reporting.

Figure 3: Output data submission screenshot from Renewables and CHP Register for monthly sustainability reporting

Fuel Measurements

Fuel Reference	Quantity	Quantity Unit of Measure	Gross Cal Value	Gross Cal Unit of Measure	Heat Contribution Value	Heat Contribution %	Contamination %	Ofgem Copy of Samples	Fuel Specification
Please select... ▾	0	Kg ▾	0	MJ/Kg ▾	0.000000000000	0	0	<input type="checkbox"/>	

Information relevant to the biomass consignment – including biomass name (as selected by fuel reference), quantity, GCV and contamination (if relevant).
This information is determined by the agreed FMS procedures

Land Criteria		GHG Criteria				
Meets Land Criteria?	Land Criteria: Reason ¹	Installation bioliquid production date	Emission Figure	Emission Unit of Measure	Unknown/Exempt	GHG Criteria: Reason ²
Please select... ▾		Please select... ▾	0	% ▾	Please select... ▾	

Confirmation of whether the biomass consignment has met the land criteria or not.
Operator should select either 'yes', 'no', 'unknown' or 'exempt' from the dropdown
'Land Criteria: Reason' only needs to be completed for solid biomass or biogas where the consignment has not met the land criteria or the operator has reported unknown.

'Installation bioliquid production' date applies only to bioliquid consignments and will give options of 'before 5 October 2015' or 'on or after 6 October 2015'. Select according to the date on which the installation that produced the bioliquid **first** started production of liquid fuel from biomaterial.
GHG emission information associated with the biomass consignment.
Operator should either enter an emission figure or select 'unknown' or 'exempt' from the drop down.
'GHG Criteria: Reason' only needs to be completed for solid biomass or biogas where the consignment has not met the relevant GHG threshold or the operator has reported unknown.

4. Profiling requirements

Chapter summary

This chapter sets out the profiling requirements for all stations >50kW and the annual requirements for solid biomass and biogas stations with the DNC >50kW and a TIC <1MW. It also explains how we use this information.

Profiling information

4.1 The Orders⁷ set out that each year the operators of biomass stations >50kW DNC must submit information on the sustainability characteristics of their biomass. This is called the profiling information, and must be submitted for each consignment of biomass used in the obligation period. The profiling information consists of:

- a. the material that the biomass came from (for example, whether it was composed of wood),
- b. the form of the biomass, if the biomass was solid and can take different forms (for example, wood can take a variety of forms, depending on whether and how it has been processed and what it is),
- c. whether the biomass was waste or wholly derived from waste,
- d. whether the biomass was animal excreta,
- e. where the biomass was plant matter or derived from plant matter, the country where it was grown,
- f. if the information in 'e' isn't known, or the biomass was not plant matter or derived from plant matter, the country the operator obtained the biomass
- g. quantity – its mass in tonnes if it's solid, or its volume in litres if it's liquid, or its volume in m³ if it's gaseous, when measured at 25 degrees Celsius and 0.1 megapascals,
- h. if the biomass was an energy crop, its type and what the land it was grown on used to be used for in the year before it was first used to grow energy crops on,
- i. if the biomass was composed of, or derived from, wood (other than waste):⁸
 - o the name of the forest or other place where that wood was grown,

⁷ Article 82 of the ROO, Article 54 of the ROS and Article 46 of the NIRO Order.

⁸ These annual reporting requirements are additional to, and should not be confused with, reporting against the land criteria for woody biomass on a monthly basis for bioliquid stations and solid biomass and/or biogas stations ≥1MW.

- a description of the forestry management or land management practices used in the forest or other place where that wood was grown,
- the proportion of the biomass that was composed of, or derived from, hardwood and softwood,
- if the wood was a protected or threatened species, the name of that species and the proportion of the biomass that is likely to be composed of, or derived from, that species,
- the proportion of the biomass (if any) that was composed of, or derived from, saw logs and identify the specification adopted to determine the proportion of saw log, and
- if the biomass was bioliquid, used in a generating station on or after 1 January 2018, the energy content of the bioliquid produced from each of the following categories of crop:
 - starch-rich crops; including cereals (regardless of whether only the grains are used or the whole plant (such as in the case of green maize) is used, tubers and root crops (such as potatoes, Jerusalem artichokes, sweet potatoes, cassava and yams) and corm crops (such as taro and cocoyam),
 - sugars,
 - oil crops, and
 - any other crops grown as a main crop primarily for energy purposes on agricultural land.

4.2 We have worked closely with BEIS (formally DECC) and the Forestry Commission to outline suitable reporting categories for the profiling data for wood (bullet 'i' above) so that the data given to the UK government is useful.

4.3 Table 3 gives descriptions of some of the terms below. If the operator selects 'other', they should provide further information. For 'yes' and 'no' responses we have also included 'yes – majority' and 'yes – minority' to recognise that operators may be sourcing wood that is considered a single consignment from multiple forests with differing practices.

4.4 The operator should report per consignment by providing the following:

- name the forest or name the region of source at state/county level,
- select forest type from the following: primary forest, other naturally regenerated forest, other naturally regenerated forest of introduced species, planted forest, mix of the above, or other (see Table 3 for a description of these terms),
- select harvesting system from the following: clearfell, thinning, mix of the above, other (see Table 3 for a description of these terms),

- Forest was managed to supply energy and non-energy markets? yes, yes – majority, yes – minority, no,
- Was the harvest made as part of a pest/disease control measure? yes, yes – majority, yes – minority, no,
- Intention for forest/land manager to retain forest cover, restock or encourage natural regeneration within five years of felling? yes, yes – majority, yes – minority, no,
- Where any of the wood was likely to be a protected or threatened species, name the species and indicate the proportion of biomass, by weight, that is likely to be composed of that species: None, 1-25%, 26-50%, 51-75%, 76-100%,
- Indicate the proportion, by weight, of hardwood: None, 1-25%, 26-50%, 51-75%, 76-100%,
- Indicate the proportion, by weight, of softwood: None, 1-25%, 26-50%, 51-75%, 76-100%,
- Indicate the proportion, by weight, of saw log: None, 1-25%, 26-50%, 51-75%, 76-100%, and
- identify the specification adopted to determine the proportion of saw log: Specification used by the sawmill closest to where the wood was grown, specification issued by a public body for use by sawmills in the area in which the wood was grown, specification within the Forestry Commission Field Book 9.⁹

4.5 The operator should provide this information to the best of their knowledge and belief. Whilst the profiling data does not need to be directly independently verified by the annual sustainability audit report, we recognise that for those having to meet the sustainability criteria some of the profiling data will feed into this. For example, the auditor doesn't have to verify the country of origin (section 4.1 - point 'e' above), but without this information the operator won't be able to establish whether the sustainability criteria have been met.

4.6 Table 2 is an example of what information we expect the operator to provide for this annual requirement.

Exemptions

4.7 Operators using only waste which does not meet the definition of biomass are exempt from reporting profiling data.

4.8 Operators using biogas formed by the anaerobic digestion of material which was excreta produced by animals or by waste, do not need to provide the information on points g-i in section 4.1 above.

⁹ The specification in the second column of Table 1.

Table 2: Examples of profiling data

Element	Detail	Example 1	Example 2	Example 3	Example 4
Biomass type	Material from which the biomass was composed	Miscanthus	Rapeseed oil	Biogas from the AD of manure	Virgin wood off-cuts
Biomass form	Where the biomass was solid and can take different forms, the form of the biomass	Pellets	N/A	N/A	Chipped
Waste	Whether the biomass was waste or wholly derived from waste	No	No	No	No
Excreta from animals	Whether the biomass was excreta produced by animals	No	No	Yes	No
Country of origin	Where the biomass was plant matter or derived from plant matter, the country where the plant matter was grown	England	UK	N/A	UK
Country of purchase	Where the information specified above is not known or the biomass was not plant matter or derived from plant matter, the country from which the operator obtained the biomass	N/A	N/A	UK	N/A
Mass / volume	Where the biomass is solid, its mass (in tonnes) Where the biomass was liquid, its volume (in litres) when measured at 25°C and 0.1 MPa (Megapascals) Where the biomass was gas, its volume (in cubic metres) when measured at 25°C and 0.1 MPa	10000 tonnes	400 litres	N/A	200 tonnes

Energy crop	Where the biomass was an energy crop, the type of energy crop and the use of the land on which the biomass was grown in the year before the land was first used to grow energy crops	Yes, Miscanthus, Agriculture	No	N/A	No
Wood	<p>Where the biomass was composed of, or derived from, wood (other than waste):</p> <ul style="list-style-type: none"> the name of the forest or other location where that wood was grown; a description of the forestry management practices or land management practices used in the forest or other location where that wood was grown; name of species of wood if protected or threatened; proportion of hardwood and the proportion of softwood; and the proportion of the biomass (if any) that was composed of, or derived from, saw logs. specification adopted to determine the proportion of saw log 	N/A	N/A	N/A	<p>Forest 'X'</p> <p>Forest type: Primary forest</p> <p>Harvesting system: Thinning</p> <p>Supply energy & non-energy? Yes – majority</p> <p>Harvest for pest/disease control? No</p> <p>Intention to retain, restock or encourage natural regeneration? Yes</p> <p>Protected or threatened species group:n/a</p> <p>Hardwood proportion: 1-25%</p> <p>Softwood proportion: 76-100%</p>

					<p>Saw log proportion - 1-25%</p> <p>Specification within the Forestry Commission Field Book 9</p>
Bioliq	<p>Where the biomass was a bioliq:</p> <ul style="list-style-type: none"> • if the bioliq is derived from a Starch-Rich Crop; • if the bioliq is derived from a sugar; • if the bioliq is derived from an oil crop; • if the bioliq is derived from a crop grown as a main crop primarily for energy purposes on agricultural land • the energy content (Gross Calorific Value) of the bioliq 	N/A	<p>No,</p> <p>No,</p> <p>Yes,</p> <p>Yes,</p> <p>36 MJ/L</p>	N/A	N/A

Wood profiling data descriptions

4.9 Ofgem have worked closely with BEIS (formerly DECC) and the Forestry Commission to provide operators with categories for reporting against the wood profiling data requirements in paragraph 4.4. Table 3 below provides a description of the key terms and where these have been sourced.

Table 3: Description of terms for wood profiling data

Term	Description	Source
Forest Type		
Primary forest	Woodland of native species where there is no clearly visible indication of human activities and the ecological processes are not significantly disturbed.	As defined in Schedule 3 of the ROO and Schedule A2 of the ROS and NIRO Orders
Other naturally regenerated forest	Naturally regenerated forest where there are clearly visible indications of human activities. For example, boreal or boreal mixed wood forest in Quebec	Food and Agricultural Organisation of the UN: Forest Resource Assessment 2015 Terms and Definitions ¹⁰
Other naturally regenerated forest of introduced species	Other naturally regenerated forest where the trees are predominantly of introduced species. For example, Sitka spruce or Douglas fir in the UK	
Planted forest	Forest predominantly composed of trees established through planting and/or deliberate seeding.	
Harvesting System		
Clearfell	Clear felling is a silvicultural operation where the main objective is to remove all stem wood from a defined area of forest in a single operation. After harvest, clearfelled sites are usually replanted with young trees or managed so that forest cover regenerates naturally via the seed bank present or via the growth of new shoots from existing stumps and root stock (often referred to as 'coppicing'). Clearfelling may be used to manage diseases and pest outbreaks or remove unwanted forest cover.	As provided by the Forestry Commission

¹⁰ <http://www.fao.org/docrep/017/ap862e/ap862e00.pdf>

Thinning	Thinning is a silvicultural operation where the main objective is to reduce the density of trees in a stand, improve the quality and growth of the remaining trees and produce a saleable product. Thinning can achieve other objectives such as altering the species composition of a stand, improving the health of the remaining trees or disturbing an established ground flora to enhance opportunities for natural regeneration	Based on Forestry Commission Thinning Guide ¹¹
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Sustainability reporting for solid biomass and biogas stations with a DNC >50kW and a TIC <1MW

4.10 These stations are not required to provide sustainability information each month, but will instead submit information on the land criteria and GHG criteria at the end of the year as part of their profiling data.

4.11 The information on the land and GHG criteria should be reported to the best of the operators knowledge and belief and does not link to ROC issue. It should be submitted at the same time as the profiling data and a template for submission will be made available nearer the time.

4.12 Table 4 is an example of what information we expect the operator to provide for this annual requirement.

Table 4: Examples of annual reporting

	Example 1	Example 2	Example 3
Fuel name	Woodchip	Biogas from maize crop	Biogas from foodwaste
Fuel reference	B-W-1	AD-AD-1	AD-AD-2
Land criteria	Yes	Unknown	Exempt
Land criteria reason	n/a	Sustainability information not available	n/a
GHG criteria	60gGHG/MJ of electricity	Unknown	Exempt
GHG criteria reason	n/a	Sustainability information not available	n/a

¹¹[http://www.forestry.gov.uk/pdf/Silviculture_Thinning_Guide_v1_Jan2011.pdf/\\$FILE/Silviculture_Thinning_Guide_v1_Jan2011.pdf](http://www.forestry.gov.uk/pdf/Silviculture_Thinning_Guide_v1_Jan2011.pdf/$FILE/Silviculture_Thinning_Guide_v1_Jan2011.pdf)

Use of sustainability information

4.13 In accordance with the Orders,¹² each year we must send a summary of the sustainability information it receives to BEIS, DfE and the Scottish government. This includes how each operator has reported against the land criteria and GHG criteria, as well as the annual profiling data.

4.14 This information is used by the relevant authorities to monitor the sector and to inform future policy. It may also be used for statistics, responding to queries from the public and for publications. We will also publish a summary of this information alongside the RO Annual Report.

¹² Article 86(2) of the ROO, Article 57(1A) of the ROS Order and Article 49(1A) of the NIRO Order

5. Audit: The requirements and ISAE 3000 (revised)

Chapter summary

The Orders explain how the annual sustainability audit report should be prepared. They also set out specific points to address during the audit process.

Introduction

5.1. All bioliquid stations and solid biomass and/or biogas stations $\geq 1\text{MW}$ are required to submit an annual sustainability audit report. The purpose of this audit is to verify the sustainability information reported to us on a monthly basis.

5.2. The Orders¹³ set out requirements on how the audit report should be prepared. It must:

- be prepared by a person independent to the generating station (an independent verifier),
- consider whether the systems used to produce the relevant sustainability information are likely to produce information which is reasonably accurate and reliable,
- consider whether there are controls in place to help protect the relevant sustainability information against material misstatements due to fraud or error ,
- consider the frequency and methodology of any sampling carried out for the purpose of obtaining or checking the data on which the operator relied in preparing the relevant sustainability information,
- consider the robustness of the data on which the relevant sustainability information was produced,
- state whether anything has come to the attention of the person preparing the report to indicate that the relevant sustainability information is not accurate, and
- be prepared in accordance with the requirements in respect of limited assurance engagements prescribed in ISAE 3000 (revised) or equivalent.¹⁴

5.3. 'Relevant sustainability information' for bioliquids¹⁵ and non-waste solid biomass and biogas¹⁶ refers to the information submitted against the GHG emissions and land criteria. For

¹³ Article 83 and 84 of the ROO, Article 54A and 54B of the ROS Order and 46A and 46B in the NIRO Order.

¹⁴ At the time of writing Ofgem is not aware of any equivalent standards. If the operator and its auditor wish to use one, they should contact Ofgem in advance so we can confirm this is acceptable.

¹⁵ Note that for bioliquids article 83(8) of the ROO, article 54A(8) of the ROS Order and 46A(8) in the NIRO Order refer to "relevant sustainability information", and should be read alongside the definition of "sustainability information" provided in article 2 of the Orders.

¹⁶ Article 82(5) of the ROO, Article 54(3ZB) of the ROS Order and 46(3ZB) in the NIRO Order specify the relevant sustainability information that apply for non-waste solid biomass and biogas.

waste solid biomass and biogas¹⁷ it refers to whether the biomass was waste or wholly derived from waste.

5.4. For bioliquid fuels only, the Orders also require the sustainability audit report to:

- say whether the bioliquid fuel was certified under an environmental quality assurance scheme. If so, the scheme should be named and confirmation should be provided as to whether it has been approved by the EC, and
- say if the bioliquid was not derived from waste or residue and the actual value method or the mixed value method was used to calculate the GHG emissions. Say whether a restored degraded land bonus and emission saving from soil carbon accumulation via improved agricultural management were included in the GHG calculations.

5.5. It is the operator's responsibility to provide us with the annual sustainability audit report. This report must meet the requirements of the Orders and be submitted to us by the relevant deadlines in Chapter 2.

5.6. If the operator is waiting to hear about their application for RO accreditation for their generating station, they may wish to consider the auditing requirements and engage with auditors at an appropriate stage. This is because the accreditation process can vary in timing. No ROCs can be issued, even on accreditation being granted, until a sustainability audit report has been submitted and accepted by Ofgem for the relevant obligation period. In this situation, we advise the operator to contact us.

5.7. This report must be supplied regardless of the auditor's conclusion. Organising the verification and appointing a suitable auditor is the operator's responsibility.

Assurance standard – ISAE 3000 (revised)

5.8. The Orders¹⁸ require the sustainability audit report to be prepared to an adequate standard: ISAE 3000 (revised) or equivalent.¹⁹

5.9. ISAE 3000 (revised) helps verifiers to undertake assurance engagements of non-financial information. Developed by the International Auditing and Assurance Standards Board (IAASB), it is based on the same framework that underpins the IAASB's International Standards on Auditing.

5.10. ISAE 3000 (revised) is not limited to sustainability reporting. It covers a wide range of non-financial assurance engagements. The standard itself is therefore sparse on the detail that may help operators and verifiers with the specifics of the RO biomass sustainability audit.

5.11. It is the auditor's responsibility to do the assurance and complete the written report in accordance with ISAE 3000 (revised). The operator must ensure that they appoint a relevant

¹⁷ Article 82(3)(c) of the ROO, Article 54(3)(c) of the ROS Order and 46(3)(c) in the NIRO Order specify the relevant sustainability information relevant to waste solid biomass and biogas.

¹⁸ Article 83 and 84 of the ROO, Article 54A and 54B of the ROS Order and 46A and 46B in the NIRO Order.

¹⁹ A revised version of ISAE 3000 was published and is effective from assurance engagements when the assurance report is dated on or after 15th December 2015 <http://www.ifac.org/publications-resources/international-standard-assurance-engagements-isae-3000-revised-assurance-eng>

and competent auditor, and agree the scope of work with them. The operator should fully understand the requirements of ISAE 3000 (revised).

Background of ISAE 3000 (revised)

5.12. ISAE 3000 (revised) provides information for people involved in the assurance engagement – in this case the operator of the generating station and their auditor. It sets out the importance of the initial work required to identify the scope of the engagement. ISAE 3000 (revised) principally provides guidance to the auditor on carrying out assurance engagements and structuring the report. However, the operator should also read it so they understand their role and requirements and those of their auditor.

5.13. The paragraphs 2.12 to 2.23 below have more information on what ISAE 3000 (revised) covers. This should provide a useful summary for sustainability reporting, but isn't a substitute for reading ISAE 3000 (revised) itself in full.

5.14. **Ethical requirements** – Details how the verification body and its personnel should comply with the requirements of Parts A and B of the 'Code of Ethics for Professional Accountants'.

5.15. **Engagement acceptance** – Information explaining that the verifier should accept engagements only if they are satisfied that the people doing the engagement are both competent and knowledgeable in the subject. The verifier should ensure they can deliver to the requirements of the engagement. In this case this is to comply with ISAE 3000 (revised) and to report against the additional requirements of the Orders²⁰.

5.16. **Quality control** – Illustrates the internal controls that the verification body should have. These should assure it that the firm and its personnel comply with all necessary professional standards and regulatory and legal requirements, and that the assurance reports issued by the verifier are appropriate to the particular engagement.

5.17. **Planning and performing the engagement** – Describes the need for the verifier to plan the engagement so that it will be performed effectively. It should include ongoing evaluation and revisions of the initial risk assessment if necessary. In order to perform this work, the verifier will need to understand the operator's data, systems, processes and controls.

5.18. **Terms of the engagement** – It is important that there is a clear understanding and agreement concerning the scope and purpose of the engagement between the verifier and the operator. At this stage, preparatory work (ie initial risk assessment) must have been completed by the verifier to define the scope and hence the terms of the engagement. They can record this in an engagement letter or other suitable kind of contract.

5.19. The terms of engagement should be set out so that the responsibilities and liabilities of the operator and auditor are clearly and unambiguously defined. It is vital that the operator fully appreciates the importance of this document and the terms agreed as it will set out the basis on which queries or issues raised by us, if any, will be addressed. For instance, if the terms of engagement do not include the complete requirements for producing the RO annual sustainability audit report, it might cause problems for the operator if we ask for a revised audit report, further work or other information. If there are aspects of the RO requirements

²⁰ Article 83 and 84 of the ROO, Article 54A and 54B of the ROS Order and 46A and 46B in the NIRO Order.

not included in the terms of the engagement, the verifier may consider them outside the scope of the engagement.

5.20. **The use of experts** – For the sustainability audit reports, a verification body, with expertise in ISAE 3000 (revised), may wish to appoint an expert with specific subject knowledge (eg an agronomist), to help with verification. This section explains that if the verifier uses a technical expert during the engagement, they should get evidence that the expert's work is adequate and that the verifier accepts full responsibility for the opinion formed.

5.21. **Obtaining evidence** – Gives examples on some of the generic circumstances where the verifier should have enough evidence to base their opinion on.

5.22. **Representations** – The verifier should get representations from the responsible party (the operator of the generating station) as appropriate. In this context, the verifier should get, as a minimum, a formal management letter from the operator confirming that all relevant data, information and records have been made available to the verifier for them to conduct their work. It also confirms that the operator takes full responsibility for ensuring that this is all complete and accurate.

5.23. **Considering subsequent events** – Outlines how events occurring after the end of the reporting period should be considered by the verifier. Some events, eg changes in processes, may affect the subject matter and thus the verifier's opinion.

5.24. **Documentation** – The verifier is required to maintain adequate documentation that shows the engagement was performed to professional standards. Issues which are, or could be, material should be documented to support the assurance report. They can do this with an issues log.

5.25. **Preparing the assurance report** – Demonstrates the areas that must be included within the written report. More information on the basic elements of the report is in Chapter 7.

Risk and materiality-based assessments

5.26. ISAE 3000 (revised) states that the auditor should consider materiality and assurance engagement risks when planning and performing an assurance engagement.

5.27. Determining inherent risk is down to the professional judgment of the auditor. The risk assessment is intended to reduce the risk of the auditor failing to observe a misstatement in the data. The auditor will strive to identify which areas they consider carry the greatest risk of error or misreporting. This will then determine the sampling strategy. The risk assessment should be clearly set out and documented so that it can be presented to Ofgem, following the audit, if further details are required.

5.28. Examples of factors that may increase the risk of misstatement are the complexity of the fuel supply chain, the use of actual carbon intensity values rather than default values, if carbon intensities reported are close to the emission threshold, or where data is recorded manually rather than electronically.

Selective procedures

5.29. In determining the selective procedures that may be used, the auditor explains where they will focus their attention during the assurance engagement. This should be based on the risk of misstatement assessment previously performed by the auditor and should be enough to satisfy the auditor that the level of risk is acceptable.

5.30. As the verification progresses, if the auditor identifies areas of concern, they may want to widen the information and procedures in scope to achieve an acceptable level of risk.

5.31. If an operator has a portfolio of generating stations, the verifier may consider, (based on similarities in fuel use, fuel measurement and sampling (FMS) procedures and other things) to not visit all of the stations if they think they have enough evidence to base their conclusions on. This is acceptable, but the auditor should be able to justify this and the selection of sites that were chosen to visit. If the audit finds problems during any of the station visits, the auditor may determine that additional sites need visiting.

Materiality

5.32. Materiality relates to the importance or significance of a factor, amount or discrepancy, or combination of these, in the determination of a professional judgement. In this case, it's whether the biomass can or cannot be verified. Materiality decision-making can be applied in two ways, firstly at a "qualitative level" where there is a major problem with due process (ie not complying with agreed process or procedure with a regulatory requirement), and secondly at a "quantitative level", where reported data contains errors and misstatements.

5.33. The auditor should assess materiality to determine whether the presence or absence of information will affect the reporting parties' decisions or actions, or those of the report's intended users. For example, we will use the assurance statement to determine whether the generating station has reported correctly against the sustainability criteria. We will also use it to resolve whether any ROCs have been issued for a fuel which the auditor determines does not meet the sustainability criteria.

5.34. Many things can affect materiality. For example, when the operator reports biomass fuel use classified as a waste or processing residue, there is a risk of misstatement because these types of fuels are exempt from certain reporting requirements. Another example is using actual values to calculate the carbon intensity reported to us, as the Orders require a minimum GHG emissions threshold that must be met to comply with sustainability criteria.

Assurance approach

5.35. ISAE 3000 (revised) defines two types of non-financial data assurance engagement, a "reasonable assurance engagement" and a "limited assurance engagement". These refer to the level of acceptable assurance engagement risk and will determine how the verifier's conclusion is expressed.

5.36. In a reasonable assurance engagement, verification risk is reduced to a level where the auditor's conclusion is expressed positively. For example: "In our opinion, the operator has reported correctly for their biomass fuels, in all material respects, against the RO sustainability criteria."

5.37. In a limited assurance engagement, the risk is reduced to an acceptable level where the auditor's opinion is expressed negatively, eg: "Based on our work described in this report, nothing has come to our attention that causes us to believe that the operator has not reported correctly, in all material respects, against the RO sustainability criteria."

5.38. The Orders²¹ specify that the assurance engagement must be carried out to a 'limited assurance level', as defined in the ISAE 3000 (revised) or equivalent.

Other requirements of the Orders

5.39. As well as requiring the sustainability audit report to be prepared in accordance with ISAE 3000 (revised), the Orders include specific points to address as part of the audit process (see paragraph 5.2). This section has more information on these requirements, and how the auditor can address them.

5.40. **Accuracy and reliability of the systems.** The auditor must consider whether the systems used by the operator of the generating station to produce the relevant sustainability information are likely to produce information which is reasonably accurate and reliable. When discussing the scope of the engagement, the operator and their auditor will discuss these systems. They may include bespoke IT systems, manual systems (eg paper-based filing systems) or widely available tools such as the UK Carbon Calculator and the UK Solid and Gaseous Biomass Carbon Calculator. Methods that could help the operator ensure accuracy and reliability of the information include:

- up to date, written procedures outlining how staff should use the systems,
- a staged process of checking data, involving review by multiple people for quality control,
- where the UK Carbon Calculator or the UK Solid and Gaseous Biomass Carbon Calculator is used, a regular check for software updates,
- where input data for GHG calculations is based on existing literature, a regular review to ensure these figures are the most up-to-date and appropriate,
- quality assurance or quality control procedures,
- internal audit procedures, and
- sign-off processes.

5.41. **Fraud or error prevention measures.** The auditor must consider whether there are controls to help protect systems used by the the generating station operator to produce the relevant sustainability information against material misstatements due to fraud or error.

5.42. While it is impossible to identify and prevent every case of potential fraud and error, considering the risks is likely to already be part of the day-to-day running of the operator's business. It is therefore likely that the operator will already have considered potential areas

²¹ Article 83 and 84 of the ROO, Article 54A and 54B of the ROS Order and 46A and 46B in the NIRO Order.

for fraud or error, so has controls to reduce these risks. Examples of fraud prevention measures are:

- limiting access to systems to specified employees,
- ensuring that IT systems are protected by virus software and against hacking,
- quality assurance or quality control procedures,
- sign-off processes,
- use of an appropriate and safe record system,
- keeping paper documentation in a lockable area, and
- internal audit procedures.

5.43. The legislation does not require the auditor to assess the effectiveness of these measures. They must simply consider whether they are in place.

5.44. **Sampling frequency and methodology.** The auditor must consider the frequency and methodology of any relevant sampling performed by the operator as part of their processes for preparing or checking the sustainability information. This consideration aims to determine whether the sampling frequency and methodology used by the operator produces the sustainability information required by the Orders. Examples are:

- FMS procedures. These are agreed with us during the accreditation process and are intended to describe how quantity of fuel used, energy content and any level of fossil derived contamination are determined. The auditor is expected to review the generating station's FMS procedures and confirm whether they have been approved by us, whether they are being followed by the operator and consider their adequacy to produce the sustainability information to be reported to Ofgem. There is more information on FMS procedures and how the auditor can use them later on in this chapter and the RO: FMS Guidance.
- Other fuel sampling and analysis. As well as that carried out as part of the FMS procedures, the operator may complete other regular fuel sampling and analysis to be confident that the material they have purchased is in line with the fuel specification. This process is likely to be completed at specific intervals, with both the sampling and analysis performed to standard methodologies.
- Checks for new suppliers. Before entering into a contract with a fuel supplier, the operator is likely to perform checks. As suppliers will provide information in different formats, the operator will want to be confident that the sustainability information can be provided in a reliable and timely manner.
- Quality assurance protocols. The operator may receive input data for GHG calculations with each fuel delivery. The operator may take a sample of this data to verify that the values are appropriate. This may entail desk-based research using the internet or scientific journals to substantiate the values.

5.45. **Robustness of data** – The auditor must consider the robustness of the data the operator would rely upon in preparing the sustainability report. Examples of these are: external data, information and documentation, such as:

- input values, such as fertiliser use or crop yield, to be used as part of the GHG calculation,
- voluntary scheme certification confirmation,
- declarations, and
- certificates of laboratory analysis.

5.46. An example of a weak form of evidence is a self-certification or declaration. To be considered strong, this would generally need to be supported by other forms of evidence, such as third-party verification.

5.47. **State whether anything has come to the auditor’s attention to indicate that the relevant sustainability information is not accurate.** As well as the requirements above, the auditor will have to state whether anything they observed during the audit indicated that the sustainability information wasn’t accurate. This statement will be made as part of the conclusions and qualifications the auditor is required to express as a result of the audit. See the Conclusions and qualifications section in Chapter 7 for how to provide this information in the report.

Bioliqids only

5.48. **Identifying whether the bioliquid fuel was certified under an environmental quality assurance scheme, and if so, to state the name of the scheme and whether it has been approved by the European Commission** – the RED²² and therefore the Orders allow for recognised voluntary schemes to be used to demonstrate compliance with the sustainability criteria. The auditor will need to identify whether the bioliquid fuel is certified under an EC-approved voluntary scheme. Our guidance on sustainability criteria has information on the voluntary schemes approved by the EC. Operators and auditors should also refer to the EC Transparency Platform²³ for the latest information on approved voluntary schemes.

5.49. **If the bioliquid was not derived from waste or residue and the actual value method or the mixed value method was used to calculate the greenhouse gas (GHG) emissions from its use, identifying whether a restored degraded land bonus and whether an emission saving from soil carbon accumulation via improved agricultural management were included** – The auditor must identify whether the generating station has applied an emission saving from soil carbon accumulation, or a restored degraded land bonus when calculating the GHG emissions saving figure reported to us. Chapter 5 and Appendix 4 of our guidance document on sustainability criteria explains how these values are to be factored in when the operator calculates the GHG emissions savings associated with the fuel used. Currently, there is no definition of ‘severely degraded’ and ‘heavily contaminated land’ and therefore no bioliquid will be eligible to claim the degraded land bonus.

²² Article 18(4)

²³ http://ec.europa.eu/energy/renewables/biofuels/sustainability_schemes_en.htm

5.50. **The installation bioliquid production date** – The auditor must state if the installation bioliquid production date is before, on or after 6 October 2015 to determine which GHG emissions threshold is applicable to the generating station from 1 January 2018. The date should reflect the date the installation that produced the bioliquid first started production of liquid fuel from biomaterial. This covers the production of transport biofuel and/or bioliquids.

6. Audit: How to appoint an auditor and the verification process

Chapter summary

The operator will need to appoint and engage with an auditor. It is then the auditor's responsibility to verify the sustainability information and relevant processes. This chapter provides information on appointing an auditor and what information needs verifying.

6.1. As previously stated, to give us assurance over the sustainability information provided by the operator of the generating station, this information must be independently verified. Though the independent auditor will verify the data and produce a conclusion, the auditor and operator will have to work together throughout the verification process.

6.2. The verification process will require the operator of a generating station to go through a number of steps. Table 5 has an overview.

Table 5: Steps for operators in the verification process

Step 1	Read and understand the auditing requirements set out by the Orders and their responsibilities in the verification process
Step 2	Appoint a verification body that is appropriately qualified to undertake a limited assurance engagement of the station's sustainability data following ISAE 3000 (revised) standard, or equivalent
Step 3	Continually engage with, and submit the relevant information and biomass sustainability data and evidence to, the auditor
Step 4	Host any visits from the auditor
Step 5	Respond to any of the auditor's questions
Step 6	Correct any material and non-material misstatements identified by the auditor
Step 7	Read the audit report provided by the auditor and check that it includes all the information required (eg by using the checklist included in Chapter 7)

Step 8

Submit the annual sustainability audit report, via email, to Ofgem by the relevant date in Chapter 2.

Appointing a verifier

6.3. The operator of a generating station is responsible for appointing a verifier to carry out a limited assurance engagement in accordance with ISAE 3000 (revised) standard, or equivalent. They must satisfy themselves that their selected verifier is qualified and competent.

6.4. The following list provides some guidance on how the verification body can demonstrate their suitability:

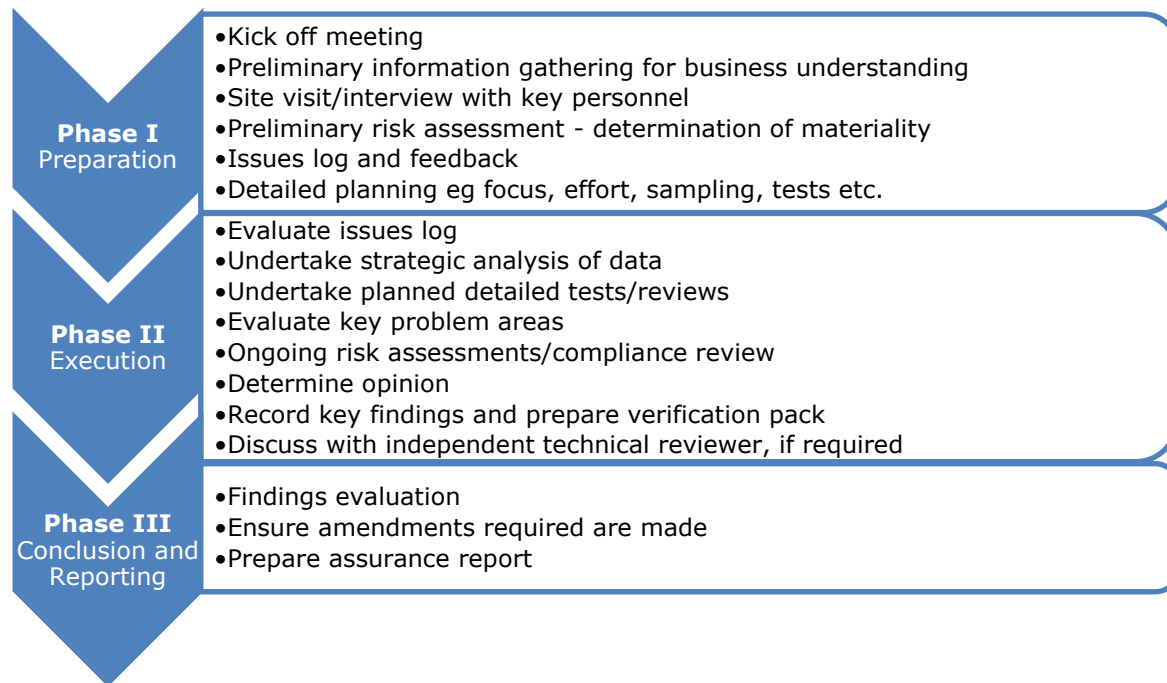
- they are not a connected person to the owner or operator of the generating station,
- has experience in carrying out ISAE 3000 (revised) assurance engagements,
- has experience in working with supply chains (the extent to which expert skills and knowledge of sustainability information for biomass are required will depend on the complexity of the fuel supply),
- has internal quality controls,
- has established and maintains personnel records, which demonstrate that the verification personnel are competent,
- has effective procedures for the training and recruitment of competent staff (employees, contractors and technical experts),
- ensures that the people involved in verification are competent for the functions they perform,
- has systems to monitor the performance of verifiers and reviewers, which are reviewed regularly, or
- keeps up with verification best practice.

6.5. Although the operator is appointing an expert to conduct the verification process, they should still understand the process, as the outcome of it will determine whether they are reporting correctly against the requirements under the RO and their compliance with the sustainability criteria, which can affect ROC issue.

Performing the engagement

6.6. Following the appointment of the auditor, and with the terms of engagement agreed, the auditor plans and performs the engagement. Figure 4 describes examples of the things the appointed auditor may do during the engagement process.

Figure 4: Typical steps taken by the auditor during the verification process



6.7. The first phase of the verification process involves engaging the auditor to agree a plan to perform the assurance engagement in accordance with the terms of engagement previously agreed (see paragraphs 5.16 and 5.17). An initial meeting is held allowing the auditor to understand the subject matter and other engagement circumstances eg how the station operates, its processes and supply chains. The auditor will then assess the engagement risk, determine the materiality and establish the detailed planning.

6.8. During the second phase, the auditor will verify the data and consider the processes and systems following the planning and testing defined in the previous phase. As a result of the ongoing risk assessment further scrutiny of the information under the scope of the audit may be required. At this phase, the auditor will also determine whether the generating station needs to do anything before the auditor produces their conclusions.

6.9. The last stage is a final evaluation by the auditor of the findings from the verification process. During this, the auditor may have recommended to the operator certain amendments which should be made before the verification process ends. The auditor will check these are complete. Finally, the assurance report is prepared with all the information obtained during the verification process, and the assurance opinion (the auditor's conclusions). It is best practice to do an independent technical review of the audit report at this stage, as a quality check. Information on how to do this and which details to include is in chapter 7.

6.10. When doing the verification engagement, the auditor should use the following basic audit principles to inform their work:

- the **traceability** of the information down the supply chain, to the origin or during and from the process of collection (dependent upon fuel classification), ie is the reported biomass data traceable back to the party or parties that generated the source information through an appropriate chain of custody system?
- the **completeness** of the reported data, ie has data been provided for each consignment? Does the available biomass data reflect the total volume of biomass reported under the RO?
- the **consistency** of methodologies used in calculating actual carbon data and operating mass balance systems, ie have consistent methodologies been followed for calculating and reporting actual carbon data? Is there any pattern where volumes of biomass change significantly?
- the **accuracy** of the reporting party's collation and reporting of data.

Good practice

6.11. We recommend the operator engages with an auditor as early as possible in the process to maximise the opportunity to learn from them and identify any discrepancies, errors or gaps early on.

6.12. Common verification practice is for data to be supplied to the auditor in an organised evidence pack. This would normally include:

- the compiled biomass sustainability data (see Appendix 2),
- description of the processes, systems or standard procedures the operator uses to generate their relevant sustainability information²⁴ (eg the carbon calculator),
- measures taken to protect the systems used to generate sustainability information against fraud or error and to ensure sustainability data produced is accurate and reliable (see 5.39 to 5.41),
- high-level description of the supply chain,
- mass balance and chain of custody records,

²⁴ Article 83 and 84 of the ROO, 54A and 54B of the ROS Order and 46A and 46B in the NIRO Order.

- FMS procedures, including consignment information,
- contact details of the organisations in the supply chain,,
- calculation spreadsheets (preferably supplied electronically so that auditors can test the formulae)
- approved voluntary scheme certificates (see 6.27 and 6.28), and
- supporting evidence to the above.

6.13. Later sections in this document refer to the data listed above in more detail and the checks to be performed by the auditor.

6.14. All the above information and any other relevant to a particular station would be needed to verify the data. If not provided in an ordered way, the verifier will probably ask for further information or clarifications, which increases the verification effort required and so will likely impact the time and cost to the operator.

What needs to be verified

6.15. The Renewables Obligation: Sustainability criteria guidance describes the mandatory sustainability criteria in detail. This includes land criteria, GHG criteria and the chain of custody system as required by the Orders. An adequate chain of custody system should be used to trace back the sustainability data reported by the operator of a generating station through all the parties in the supply chain who took legal ownership of the feedstocks or material at any point.

6.16. In doing the verification engagement, auditors must ensure the quantity of biomass reported to us each month, and the associated information against the RO sustainability criteria, are reported accurately. They must also verify that these can be traced back through the supply chain by using an adequate chain of custody system for the entire annual reporting period.

6.17. Auditors must consider the processes and systems used by the operator to produce the relevant sustainability information reported to Ofgem. Background information on the checks that need performing is in paragraphs 5.37 – 5.47. Information on how to include these within the report is in Chapter 7, paragraphs 7.36 – 7.51.

Sustainability compliance evidence

6.18. To demonstrate they comply with the sustainability criteria, operators will need to collect information and/or use voluntary schemes as evidence for their annual sustainability audit.

6.19. Some of the evidence may lie with other parties in the supply chain (eg evidence for meeting land criteria). While the physical evidence does not need to move through the supply chain with the biomass, the operator should have sufficient information to report sustainability information to Ofgem.

6.20. For this the operator may be relying on contractual agreements. Any information or evidence should be made available if required for verification, even if it is held by parties in

the supply chain. This does not necessarily need to be in paper copy – electronic is acceptable.

6.21. Previous audits have shown that using non-disclosure agreements (NDAs) can be complex. However, for some business, using NDAs is regarded as essential for commercial confidentiality reasons. Although the relevant sustainability information will still need to be verified, Ofgem appreciates these complexities, and so in those situations where NDAs are an unavoidable part of the reporting and verification engagement, we will work closely with those involved to help where we can.

6.22. For the biomass data subject to verification, the operator will need to give the auditor supporting information. This might include:

- biomass type (eg rapeseed oil, miscanthus),
- fuel classification (eg waste, processing residue),
- biomass feedstock,
- production process type,
- country of origin of the biomass feedstock,
- GHG calculation method (ie actual, default or mixed, as appropriate)²⁵. Further information on the restrictions are in Chapter 5 of the Ofgem Sustainability Criteria guidance,
- carbon intensity and associated data, for example if actual GHG values were used on crop yield and nitrogen fertiliser this may need to be verified,
- voluntary scheme(s) (including any additional checks/audits where these have been performed),
- land use on, during and after 1 January 2008 (for fuels other than wood and energy crops)²⁶,
- sustainable forest management criteria (if using wood fuel),
- chain of custody system records, or
- number of consignments for each fuel.

6.23. To be able to produce biomass data that is good enough quality to demonstrate compliance with the sustainability criteria, operators of generating stations need to ensure that they and others in their supply chain have effective systems for reporting, obtaining and retaining sufficient and appropriate evidence to support their biomass data reporting. We

²⁵ Solid biomass and biogas which have a TIC \geq 1MW will not be eligible to use the default value method; and only bioliquids can use the mixed value method. See Chapter 5 of Ofgem Sustainability Criteria for guidance on GHG calculation

²⁶ Not all energy crops fall under the RO definition of Energy Crops. See Chapter 2 our RO: Sustainability criteria guidance for specifics included in the definition.

recommend that operators of generating stations appoint a single point of contact with responsibility for biomass data reporting.

6.24. All parties in the supply chain must have a document management system in place. This means a verifiable system for the evidence related to the claims they make, that evidence should be kept for a minimum of six years, and they must accept responsibility for preparing any information about the verification of such evidence.

6.25. It is good practice to:

- liaise with the parties in the supply chain to ensure they are aware of the need for co-operation and for a chain of custody system,
- produce data transparently and as consistently as possible between years (allowing for improvements in method),
- remove unnecessary complexity from the reporting system,
- organise internal checks of the data,
- ensure all parties supplying data are aware of the rigour required and that responsibility for supplying the data is allocated,
- map the data flow within the organisation, such as between spreadsheets,
- minimise the manual transfer of data,
- ensure adequate controls of the data,
- document the system (who does what, when etc.), and
- track data over time to help identify any misstatement.

6.26. Good systems reduce the cost of verification. The greater the confidence in controls, the less effort needs to be given to verifying the data for the same level of assurance. The cost of verification can, therefore, be reduced if the verifier has confidence in the system that produced the data.

6.27. Evidence of the effectiveness of controls can come from internal sources, such as management reviews and internal audits, as well as external sources, for example, audits of the chain of custody.

The role of recognised voluntary schemes

6.28. Evidence of compliance with an approved voluntary scheme can be sufficient proof of compliance with the RO requirements that the voluntary scheme has been recognised for. In other words, the verifier can rely on the voluntary scheme and does not need to separately check that the party has complied with the sustainability requirements for which the voluntary scheme is recognised. The verifier would simply need to verify that the party is actually certified by the relevant voluntary scheme.

6.29. Some parties in the supply chain might be certified by a recognised voluntary scheme when other parties in the supply chain are not. In that case, further verification will need to be done. A party could also be certified by a voluntary scheme that is recognised for part of the sustainability requirements but not all, for example a voluntary scheme that is approved for the GHG data but not for the mass balance. In that case, the party is still subject to verification on those sustainability requirements for which the voluntary scheme is not recognised. For more information on using voluntary schemes, see Chapter 7 of the Ofgem Sustainability Criteria guidance.

Operator's documentation to Ofgem

6.30. Biomass operators must provide information to us on how fuel used is measured and sampled, the number of fuel consignments used, whether a mass balance system is required and the fuel classification (see *Fuel Classification Review* section below). This determines how the operator will report to us monthly (or annually where appropriate). This information is provided by the operator by using our templates which we then review and approve.

6.31. Biomass operators must follow the agreed fuel measurement and sampling procedures. They should hold a copy of these forms as well as confirmation that we have approved them (an email from us). This information should be made available to the auditor and used to support the audit process.

Fuel measuring and sampling (FMS) procedures

6.32. The FMS procedures are required to determine the quantity of fuel used in a month, the energy content of this fuel, and the level of any fossil fuel-derived contamination. These procedures will also determine how the relevant sustainability information will be reported by the operator as part of their monthly certificate claims.

6.33. These procedures determine the quantity of fuel reported, generally an important aspect of verifying reporting of sustainability information. For instance, feedback from auditors has been that for tracking mass balance, quantities of fuel used are important. In addition, if the auditor determines any of the consignments are unsustainable, we are required to revoke the relevant number of ROCs associated with that unsustainable consignment. Therefore, as part of the audit process, the auditor will need to identify whether the generating station has FMS procedures, whether these have been approved by us and whether they are being followed. These checks form part of the audit report requirements set out by the Orders to consider the sampling frequency and methodology.

6.34. If the operator does not have an approval email from us agreeing the FMS procedures, the auditor will need to consider whether the procedures being followed are suitable and provide accurate and reliable data. It may be appropriate to qualify an assurance opinion based on there not being FMS procedures agreed with us (see *materiality* section above and paragraphs 7.56 and 7.58).

Consignment information

6.35. As part of the FMS review process, we ask operators to consider whether they use multiple consignments of fuels and whether these are mixed at the generating station or elsewhere in the supply chain. This information is given by the operator within the FMS

questionnaires templates, and it identifies whether multiple fuel consignments are used as well as the chain of custody system implemented.²⁷

6.36. Auditors must confirm that the number of fuel consignments that the generating station reports against is correct and that the chain of custody system used is consistent with what has been declared. Guidance on determining consignments is in chapter 6 of the Renewables Obligation: Sustainability Criteria guidance document.

Fuel Classification Review

6.37. When submitting their FMS proposal for review, operators will need to consider the classification of their fuel and whether it is catered for in the common classification tables in Appendix 3 of our guidance on sustainability criteria. There are some exemptions to sustainability reporting. These are based on whether the fuel is considered a waste or a type of residue. If the operator considers the fuel to be a waste or a type of residue which is not covered in the common classification tables, we will ask them to provide evidence of the fuel classification. Operators can request our view on the fuel classification when they believe that the fuel classification indicated by these tables is not appropriate for a particular material. Chapter 3 of our guidance on sustainability criteria has general information on fuel classification.

6.38. Our views on fuel classification do not represent and should not be considered as 'a decision' or 'official approval'. We expect the operator's independent auditor to consider all the relevant evidence and, where necessary, seek further information, as part of the annual sustainability audit. If it is identified that evidence of fuel classified as a waste or a type of residue has been provided to us, the auditor will need to verify that the evidence is appropriate for the fuel. They will also need to verify that the fuel classification is correct. All views provided by us will be given case-by-case and based on the information given to us by the operator. We will not consider it sufficient for the auditor to rely solely on the correspondence between us and the operator as part of the fuel classification review.

Monthly data submissions

6.39. As part of the engagement process, the operator of the generating station will provide their auditor with the data reported to Ofgem within the monthly data submissions (or annual where agreed for a bioliquid microgenerator).²⁸ See Chapter 3 and Appendix 2 on how this information is to be provided.

6.40. As Ofgem does not have any involvement in the assurance process and the auditor does not have access to the operator's account on the Register, it is vital that a breakdown of the verified data is provided. On submission of the audit report we ensure the data verified by the auditor matches exactly with that reported to Ofgem via the Register. See paragraph 7.59 regarding amending data on the Register when discrepancies are found during the audit process.

6.41. In doing the verification engagement, auditors must assess whether the quantities of biomass fuels reported to Ofgem on a monthly basis and their associated sustainability

²⁷ The auditor should note that until April 2014 consignment information was requested to bioliquids operators in a separate Consignment Questionnaire and therefore this separate document forms part of the agreed procedures.

²⁸ Generating station with a declared net capacity of $\leq 50\text{kW}$.

information, can be traced back through the supply chain by use of an appropriate chain of custody system for the entire annual reporting period.

6.42. Where a change of the fuel used occurs or an additional fuel is used at the generating plant, the auditor will need to confirm that these have been reported correctly ie that the 'new' fuel was reported separately to the 'old' fuel and that the associated data submitted was relevant, correct and refers to the 'new' fuel.

6.43. If a quantity of fuel has been used at the generating station and not reported to us (ie where no electricity was generated or the fuel was consumed for another use elsewhere on site) this should still be considered. Each delivery of fuel will have a corresponding set of sustainability characteristics and it is important that the audit verifies that these have not continued to be reported once all the fuels have been used, regardless of the purpose.

6.44. It is, therefore necessary for the auditor to review months where no ROCs have been claimed on the use of biomass, as well as months where claims have been made. This is to confirm, for the purpose of verifying the annual mass balance, that no biomass has been used for periods of null return.

6.45. As each audit report is for the full obligation year, we require auditors to review months of both biomass usage as well as null/zero submissions. To assist this, we propose that the operator of the generating station completes a summary table to give to their auditor alongside their full data set. A template for this is in Appendix 2 of this document. When no biomass fuels have been used in any month, a reason for that needs to be given within the relevant column of the table.

7. Audit: The sustainability audit report

Chapter summary

As a result of the verification process, the operator and auditor will prepare a report presenting the outcomes of the audit. The operator will need to submit it to us. To meet the requirements of the Orders, the annual sustainability report must be presented using a certain format and contents.

Format

7.1. Following verification, the independent auditor will provide the operator of a generating station with a formal assurance opinion (a verification statement) on the data the operator holds. The assurance opinion is submitted by the operator to us as a key part of the annual sustainability audit report.

7.2. The Orders refer specifically to the provision of a sustainability audit report. However, ISAE 3000 (revised) uses the term 'assurance report'. We have also heard the use of the terms 'verification statement' and 'opinion statement'. The bullets below set out the terminology we use:

- **Sustainability audit report:** This term refers to the document that is submitted by the operator of the generating station as required by the Orders and must include the information in the checklist at the end of this chapter. It is made up of the assurance report, assurance opinion, requirements of the Orders²⁹ and the biomass data summary.
- **Assurance report:** This refers to the sections required by ISAE 3000 (revised) and should be submitted as part of the sustainability audit report.
- **Assurance opinion:** Also referred to as 'verification statement', this is the term used to describe the conclusion provided by the verifier within the assurance report.
- **Other requirements of the Orders:** Aside from the requirement for the audit to be conducted in accordance with ISAE 3000 (revised), or equivalent), the Orders set out other checks that the auditor needs to do as part of the audit and the outcome of which must also be included within the report. The outcome of these will form part of the assurance report (more detail of this is in chapter 5).
- **Biomass data summary:** Also referred to as 'biomass sustainability data', this term refers to a summary of the generating station's monthly fuel and sustainability data (more detail on this in chapter 2).

7.3. If the operator has more than one biomass generating station accredited under the RO, the auditor will probably be engaged to do a multisite audit. In this case, parts of the audit

²⁹ Article 83 and 84 of the ROO, Article 54A and 54B of the ROS Order and 46A and 46B in the NIRO Order.

may be shared by all the stations (eg they may have the same fuel and supplier). Even so, the auditor will need to produce a report for each station.

7.4. Where an auditor carries out a multisite audit, each report should still be tailored to each individual generating station. The reports should contain details specific to that generating station, for instance specific FMS requirements. The reports should also include any special circumstances for that station, eg where a particular station has not yet received RO accreditation or FMS procedures are not yet approved.³⁰

Author of report

7.5. While there is a need for consistency in the reports, we recognise that different auditors may have different styles. So we will accept reports using one of two structures:

- Written entirely by the auditor, including the requirements of ISAE 3000 (revised), information on systems and a representation of the data verified. This approach exists on the basis that the operator provides the raw data to the auditor rather than a summary report.
- Two sections: the operator writes an initial report containing a management assertion and its data on the sustainability systems, and the auditor writes the second section in accordance with ISAE 3000 (revised).

7.6. The Orders specify that some parts of joint reports must be written by a party independent of the generating station. In particular, the auditor must comment on the additional requirements of the Orders ie consideration of the other requirements of the Orders. In both approaches, the operator remains responsible for the subject matter.

Documentation

7.7. We ask that all the information is in a single document submitted by the operator. This document needs to include all the requirements of both the Orders and ISAE 3000 (revised). The following sections and the supporting checklist at the end of this chapter will help you do this.

7.8. After the initial review of a sustainability audit report, there may be times when we need more information. In this case, we will explain it formally and clearly to the operator. We may agree that this additional information can be provided in a supplementary document, but this will be determined case by case.

Providing evidence

7.9. The purpose of the annual audit is to require a qualified party independent from the generating station to review and verify the biomass sustainability data, systems and draft the report. Generally, we will rely on the professional expertise of the auditor in evaluating the evidence that has been presented during the verification engagement, and as described in the sustainability audit report. We will therefore not need to see the evidence itself.

³⁰ Where an operator is awaiting a decision on an application for RO accreditation for a generating station, given that no ROCs can be issued until an annual sustainability audit report has been submitted and accepted by Ofgem, the operator may wish to consider the auditing requirements and engage with auditors at an appropriate stage.

7.10. Sometimes we may need to see additional evidence to come to a final determination. In this case, we will ask the operator for the extra details in writing, after initial review of the sustainability audit report.

Contents

7.11. ISAE 3000 (revised) indicates what content must be included in the sustainability audit report. Along with these requirements, those set out by the Orders also need to be included in the report. As much as possible, these should be in clear distinct sections. This will help make our review process more efficient.

7.12. Alongside a clear structure of the report, a satisfactory level of detail is vital for us to be able to review the sustainability audit report. It is on the reported information alone that Ofgem will determine whether the operator had reported correctly during the period, and that the verification has been carried out appropriately and to an acceptable standard. Likewise, providing irrelevant information will not add any value to the report but will increase the time it takes us to review them.

7.13. Reports that fail to address all sections below, or provide a sufficient level of detail will not be accepted as providing an adequate level of assurance. We expect each of the requirements to be addressed by the verifier within the sustainability audit report. Where evidence required to address a particular section is not available, we expect a statement to be made explaining the reasons for its absence.

7.14. To assist with structuring the sustainability audit reports, we have provided further information on the required contents including both ISAE 3000 (revised) requirements and other requirements set out by the Orders in the sections below. Additionally, a checklist with the main points that need to be addressed in the report is provided at the end of this chapter. This list should not only be used by auditors, but also by operators of the generating station as a final check to ensure that requirements are met before the report is submitted to us.

Title

7.15. The document must have a title at the top. This must include the words 'independent assurance report' and note the level of assurance provided. In the case of the sustainability audit reports, this is to a level of 'limited assurance'.

Date

7.16. The date the report has been compiled must be included. This is generally at the front of the document or alongside the signature at the end.

Addressee

7.17. The report must say who it has been prepared for which would normally be the operator of the generating station. The report may also name a specific person. The report must provide the address of the organisation in addition to that of the generating station, to help us identify the relevant station where they differ.

7.18. Sometimes the report is to be addressed to a party who is not the operator (see example in paragraph 7.30). In this situation, as the audit requirement lies with the operator,

the operator has to authorise the third party to liaise with us and submit the report on their behalf. Evidence of this (eg authorisation letters) must accompany the report. A clear explanation of the relationships between the parties will also need to be provided in the report. We will assess these case by case and determine if further details or actions are needed.

Responsibilities

7.19. It is important that both parties to the engagement fully understand and respect each other's responsibilities. Within ISAE 3000 (revised), the two parties to the verification engagement are referred to as the 'reporting party' and 'the practitioner', these being the operator and the verifier respectively. The following examples indicate some of the responsibilities that the operator and verifiers should consider when preparing and submitting the sustainability audit report.

7.20. Operators' responsibilities include, among others:

- preparing and reporting their data to us on the Register for the issuance of ROCs,
- appointing a suitably qualified verifier,
- disclosing all necessary information to that verifier for them to fully understand the requirements of the engagement,
- ensuring that they have evidence (or that it exists in the chain of custody) to support the information needed by the verifier for them to come to an opinion, to a limited assurance level, as to whether the reported data and information complies with the requirements of the assessment criteria,
- disclosing any significant changes or events that have occurred or are expected to occur that could affect their opinion,
- responding to queries from the verifier providing additional information/evidence when requested,
- correcting any data which the verifier finds to be misstated or insufficiently supported by available evidence, and
- providing the completed sustainability audit report to us in accordance with the requirements of the legislation.

7.21. Some of the verifiers' responsibilities are:

- demonstrating to the operator that they are an appropriate party to carry out the verification engagement,
- planning and carrying out such evidence gathering and testing activities as are necessary to form an opinion, to a limited assurance level, as to whether the reported systems and data are consistent with and/or meet the declared assessment criteria,

- informing the operator both of any areas of non-conformance or misstatements within the systems and data which need to be addressed or corrected, and/or of any consignments which should be withdrawn from the verification, and
- writing the sustainability audit report, in part or in full, paying particular attention to the requirements set out in ISAE 3000 (revised) and other requirements set out by the Orders and providing the assurance opinion.

Statement referencing ISAE 3000 (revised)

7.22. The report must include a positive statement that the engagement was performed 'in accordance with' ISAE 3000 (revised). Saying that it was done 'with reference to' ISAE 3000 (revised) is not sufficient. This statement is generally put early on in the document, because it should cover not just what is written in the report, but to confirm that the entire engagement is based on ISAE 3000 (revised). ISAE 3000 (revised) is not the assessment criteria and should not be referenced as such.

International Standard on Quality Control 1 (ISQC1) and the International Ethics Standards Board for Accountants (IESBA) Code

7.23. ISAE 3000 (revised) requires that the verifier provide a statement, that the firm of which the practitioner is a member applies ISQC1, or other professional requirement, and that the practitioner complies with the independence and other ethical requirements of the IESBA Code, or other professional requirement.

7.24. We recognise that not all organisations apply ISQC1 and comply with the ethical requirements of the IESBA code. However, ISAE 3000 (revised) allows auditors to outline other professional requirements that are equivalent to ISQC1 and the ethical requirements of the IESBA Code. In these instances auditors should detail how they meet requirements which are equivalent to ISQC1 and the ethical requirements of the IESBA Code.

The assessment criteria

7.25. The Orders set out the legislative framework that the operator must comply with. We expect the Orders to be referenced as the assessment criteria for the verification³¹ and should be relevant to where the generating station is. For example, if the generating station is based in England or Wales, the reference should be the "Renewables Obligation Order 2015 (as amended)".

7.26. There may be instances when additional criteria are needed, for example to reference the residue definitions that are not set out within the legislation. Chapter 3 of the Renewables Obligation: Sustainability Criteria has information on the definition of residues.

7.27. Although not to be referenced as criteria, it is good practice for the audit principles of traceability, completeness, consistency and accuracy (see Chapter 6) to be stated in the audit report to make it clear that they were used during the verification engagement.

³¹ Within the report, depending on the location of the generating station this should be referenced as either "The Renewables Obligation Order 2015 (as amended)", "The Renewables Obligation (Scotland) Order 2009 (as amended)" or "The Renewables Obligation Order (Northern Ireland) 2009 (as amended)".

Subject matter

7.28. The report must identify which generating station it relates to (this should match the name on the Register), the reporting period covered (eg 1 April 2015 to 31 March 2016) and the subject matter that is being verified (ie the monthly sustainability information).

7.29. We have created a way for operators to extract their biomass sustainability data from the Register. This will contain the biomass data laid out as reported within the monthly output submissions. Operators should use this to complete the data template in Appendix 2 to be provided to their auditor. Once verified by the auditor, the data table should be included in the report. If the data table in the format in Appendix 2 is not provided in the report this will delay the approval of the sustainability audit report.

Solid biomass and biogas waste

7.30. Operators using solid biomass and biogas which are categorised as wastes³² are exempt from reporting against sustainability criteria. The auditor will see that these operators would have reported 'exempt' for GHG and land criteria in the Register. For these generating stations, the auditor will need to verify the categorisation of the consignments as waste is correct, and so the exemption from the GHG and land criteria is appropriate. The data table in Appendix 2 should still be included within the report so we have certainty that the information presented to the auditor is the same as reported throughout the reporting period

Risk and materiality-based assessments

7.31. The report must include comments on how the auditor considered risk assessment and materiality, and how this affects the sampling strategy. This must cover both qualitative and quantitative aspects of reporting. For example, if sample months are reviewed, rather than the complete years' data, then they should comment on why certain months were selected. Additionally, they should justify why they did or didn't visit generating stations and/or suppliers.

7.32. It's important to mention whether the verification was carried out with someone who isn't the operator of the generating station. For example, if the operator has asked a third party (eg fuel supplier, consultant etc) to engage with the auditor and submit the audit report on their behalf. We will expect the auditor to explain in the report how the different parties interact and the relationship between them. We need to be satisfied that the information is adequate and sufficient, so the auditor will need to provide information on how they ensured this was the case. This will be especially important if all the audit activities were conducted at the third-party site (ie the consultants office, or at the fuel supplier) and not at the generating station. We also suggest that the operator is included in any correspondence with us, so they are aware of the information submitted to us, and confident that it is adequate.

7.33. This information can be provided as a standalone section or as a short paragraph in an existing section. It should always be included before the *summary of work performed*, as the risk assessment and sampling strategy determines what work they do.

³² See Chapter 3 of the Sustainability Criteria guidance document for definition of waste.

Summary of work performed

7.34. As set out in ISAE 3000 (revised), the information described in the *summary of work performed* section needs to be detailed enough so that readers of the assurance report can understand what the verifier has done.

7.35. As Ofgem does not participate in the verification engagement, we must use the audit report to satisfy ourselves that the ROCs should have been issued. We recognise that a significant amount of work is undertaken by both parties. However if it's not transparent, it's likely that we'll have to ask for further information or clarification.

7.36. This section of the report must include a description of what activities have been undertaken and how the evidence for sustainability information up the supply chain has been tested. Some examples of typical activities that may be assessed by the auditor are:

- interviews have been undertaken with [*provide name*] (Technical Manager at the generating station) to understand the generating station's systems and processes for collecting and collating sustainability information,
- an assessment was made of the operator's evidence to support the fuel classification applied to each of the fuels. This includes a review of waste transfer notes and declarations by the fuel supplier in accordance with the waste definition and fuel classification tables in the Ofgem guidance,
- a check was done against the Voluntary Scheme 'A' which was applied to demonstrate compliance with the chain of custody system requirements through the supply chain,
- a review of the input and output of the carbon calculator was performed. This included a review of the input data, including literature values and a check that the version of the calculator used was the most up to date, and
- a site visit to the generating station was made on 4th May 2017. During this visit the auditor observed the delivery of fuel, on site measuring, storage and recording of information.

7.37. This section of the report must make clear where the auditor has visited – eg generating station, operator's organisational headquarters, fuel supplier, etc. It should be noted that we would generally expect the auditor to visit the generating site otherwise a justification for this needs providing.

Other requirements of the Orders

7.38. Chapter 5 introduced the specific audit report requirements set out by the Orders that the audit must address. For us to accept the audit report submitted, it must clearly state that these points have been addressed by the auditor.

7.39. These specific points must be mentioned in the section written by the independent auditor. As these points are part of the verification activities, this information should be included within the *summary of work performed* section. However, the auditor may prefer to address these points in a distinct section, eg 'Consideration of the Other requirements of the Orders', which we would also accept.

7.40. There are some examples below of how information on each of the requirements of the Orders³³ can be presented. It is important that the auditor refers to and uses the wording in the Orders.

7.41. Considering the accuracy and reliability of the systems and controls against fraud and error. The auditor should confirm, in their section of the report, that these have been considered. We prefer this information to be a statement in the *summary of work performed* or as a standalone section. For example:

- “We have considered whether the systems used to produce the relevant sustainability information are likely to produce information which is reasonably accurate and reliable. We have also considered whether there are controls to help protect against misstatements due to fraud or error”.

7.42. If the auditor feels the systems are not appropriate, it should make recommendations to the operator. These should be included in the written report in the *relevant remarks* section. Any recommendations should not affect the auditor’s conclusion.

7.43. Consideration of sampling frequency and methodology – The auditor’s section of the report must include a confirmation that this has been done along with any findings. This information should be in the *summary of work performed* section or as a standalone section.

7.44. If the auditor feels the procedures are not appropriate, they should make recommendations to the operator. These should be included within the written report in the *relevant remarks* section. They should not form the basis of a material misstatement or non-conformity and shouldn’t alter the outcome of the verification.

7.45. The report should state whether we have approved the generating station’s FMS procedures, whether the operator is following them and whether the auditor thinks they are appropriate. If there is no evidence that the FMS procedures have been approved by Ofgem, this should be noted in the report as well as being listed as an outcome of the auditor’s consideration of their adequacy (eg if they are still under our review or if the operator has changed the FMS procedures approved by us without notifying us). The auditor should also think about whether a qualification of the assurance statement is needed when FMS procedures have not been approved by us. For example, it may not be clear for the auditor what we consider suitable for sampling, measurement etc.

7.46. Consideration of robustness of data – A confirmation that this has been considered must be included in the report in the *summary of work performed* section or as a standalone section, along with its results.

7.47. If there are any recommendations for improvements, these should be included in the report in the *relevant remarks* section, as explained below. Recommendations should not form the basis of a material misstatement or material non-conformity, as this would alter the outcome of the verification.

7.48. Statement on accuracy of information. As well as the requirements above, the auditor should say if they observed anything during the audit that could indicate that the sustainability information isn’t accurate. This statement will be made as part of the conclusions and qualifications the auditor is required to express as a result of the audit. See

³³ Article 83 and 84 of the ROO, Article 54A and 54B of the ROS Order and 46A and 46B in the NIRO Order.

the conclusions and qualifications section below for how this information needs to be provided within the report.

7.49. If the auditor feels that the relevant sustainability information is not accurate, they should make recommendations to the operator. The auditor should then consider the implications of these inaccuracies (ie whether to include a qualification in the report). If a qualification isn't needed (the audit conclusion is unaffected) these recommendations should be included in the written report in the *relevant remarks* section.

Bioliqids only

7.50. Identification of whether the bioliqid fuel was certified under an environmental quality assurance, and if so, to state the name of the scheme and identify whether it has been approved by the European Commission. The auditor should clearly state the name of the environmental quality assurance (ie voluntary scheme) under which the bioliqid fuel was certified and whether it has been approved by the EC. For example "the rapeseed oil used to generate electricity during 2016/17 was certified under 'X' voluntary scheme. The EC approved this scheme on 19 July 2011 under Article 18(4) of the Renewable Energy Directive."

7.51. When the auditor identifies that a bioliqid fuel is certified under an environmental quality assurance which is EC-approved, this will also need to be noted in the data table in Appendix 2 under the 'voluntary scheme' column. When a voluntary scheme has not been used, the auditor will still need to provide a comment in the report saying so. For example: "no bioliqids used for generation in 2016/17 were certified under an environmental quality assurance scheme" (Chapter 7 of the Sustainability Criteria guidance provides information on the use of voluntary schemes).

7.52. Where the bioliqid was not derived from waste or residue and the actual value method or the mixed value method were used in calculating the GHG emissions from its use, it should identify whether a restored degraded land bonus and whether an emission saving from soil carbon accumulation via improved agricultural management were included. The auditor should clearly state where an emission saving from soil carbon accumulation via improved agricultural management was included by the operator in the calculation of the GHG emissions saving figure. For example "a factor soil carbon accumulation via improved agricultural practices was included in the calculation of the GHG emissions saving figure reported to Ofgem for the rapeseed oil used to generate electricity during 2014/15". If this isn't used, the auditor will still need to comment in the report to say so.

7.53. Until definitions of 'severely degraded' and 'heavily contaminated land' are provided by the EC, no bioliqid will be eligible to claim the degraded land bonus under the RO. So at this stage all reports should state that "a restored degraded land bonus has not been included in the calculation of the GHG emission saving figure for the [*name of the fuel*] used to generate electricity during 2014/15" (see Chapter 5 and Appendix 5 of the Sustainability Criteria guidance document for more information).

7.54. The installation bioliqid production date – The auditor must state if the installation bioliqid production date is before, on or after 6 October 2015 to determine which GHG emissions threshold is applicable to the generating station from 1 January 2018. The date should reflect the date the installation that produced the bioliqid first started

production of liquid fuel from biomaterial. This covers the production of transport biofuel and/or bioliquids.

Limitations (if appropriate)

7.55. It should mention any limitations in the evaluation against the criteria of the report, such as:

- the extent of evidence-gathering,
- where the work of third parties was relied on, and
- where the company's systems or processes have been relied on without testing them.

7.56. Stated limitations should be included only to clarify the extent of the verification activities. They should not contradict the verifier's opinion. Where the assurance engagement is conducted to a limited level it should not be regarded as a limitation and should not be included in this section.

Restrictions on using the report (if appropriate)

7.57. When the criteria used to evaluate or measure the subject matter are available only to specific users, or relevant only to a specific purpose, a station restricting the use of the report should note this.

Conclusions and qualifications

7.58. This includes the auditor's opinion and any qualifications to that opinion. The opinion should be expressed to a 'limited' level as defined by the Orders.

7.59. In a limited assurance engagement, the opinion should be expressed in the negative form, for example for an unqualified opinion:

- "Based on the work described in this report, nothing has come to our attention that causes us to believe that John Smith Plc's reported data to Ofgem for the generating station Smith Generating facility during the period of 1 April 2016 to 31 March 2017 is not accurate, in all material respects, based on XYZ criteria."

7.60. There are times that it may be appropriate for the verifier to express a qualified opinion. This will be the case if the verification has brought issues to light. These issues may not be material enough to affect the verification outcome, but are nonetheless still relevant to how the sustainability audit report is prepared. A qualified opinion will be stated the same way as an unqualified opinion with the addition of "with the exception of X, Y and Z".

7.61. Some examples of issues that could lead to a qualified opinion would be;

- if FMS procedures for a generating station have not been agreed with Ofgem,
- if the FMS procedures were agreed for part of the reporting period,

- if the site wasn't operating during certain periods (eg if the auditor was not able to reconcile opening and closing figures),
- when fuels were not used for generation for a certain period, or
- when the fuel meter was out of routine calibration for certain months.

7.62. Reports given with qualified opinions will be carefully assessed by us, particularly if a comment reoccurs year after year.

7.63. If the operator has reported incorrectly, they should update³⁴ the data accordingly via the Register and within the data table assessed by the verifier. The verifier should not finalise and submit the report until they have been able to confirm that the relevant updates have been made by the operator, ie the operator would confirm in writing when it has been done. We will not accept an audit report until the data has been amended on the Register and until the data reported by the operator via the Register is consistent with the subject matter in the audit report. When the operator submits the audit report, they should include comments on which data were amended and why by email.

Details of the verifier and signature

7.64. They should clearly note the city or town where the verifier says the office that is responsible for the engagement is. For example: "This report was prepared by Martin P of JJ Verifiers Ltd, London UK".

7.65. The report should be endorsed either by the firm or by the lead verifier or technical reviewer themselves, as required by the verification body's internal procedures.

7.66. While not a requirement, it is considered good practice under any auditing systems (eg ISAE 3000 (revised)) to do an independent technical review of the report. This would involve a second auditor who has had no involvement in the verification performing a final review of the report. If this is done, we recommend that the auditor says so in the report. Technical review is considered essential to many compliance audits, and makes the audit process more robust.

Relevant remarks

7.67. This section may include:

- details of the verifier's qualifications and experience and others involved in the engagement,
- findings on particular aspects of the engagement, or
- recommendations, eg from the consideration of the sampling frequency and methodology or the robustness of data as mentioned in the Orders.³⁵ It could also

³⁴ To amend the data, the operator should log into their account on the Renewables and CHP Register and select 'output data' and then 'edit submitted output data' before proceeding to select the relevant month and update the necessary information.

³⁵ Article 83 and 84 of the ROO, Article 54A and 54B of the ROS Order and 46A and 46B in the NIRO Order.

be any other recommendations which the verifier believes should be noted upon completing the engagement.

7.68. This section should be clearly separate from the verifier’s opinion. It should be worded in a way that does not affect the verifier’s opinion.

Other considerations

7.69. In addition to an assurance report, verifiers should consider whether to give a more detailed report to the management of the reporting party (the operator). This will be confidential between the verifier and the reporting party and may describe in greater detail the work the verifier has done.

Audit report checklist

7.70. A checklist has been developed to help both the verifier and the operator to check that the sustainability audit report covers the relevant requirements. We consider that in addition to any responsibility held by the verifier, the operator has a responsibility to ensure they are satisfied the sustainability audit report meets the requirements of the legislation before submitting it to us.

7.71. Operators and auditors should use this checklist to ensure that their audit report includes all the relevant information before submitting it to us.

Requirement	Checkbox
Title	
Date	
Addressee	
Responsibilities of operator and auditor	
Statement confirming ISAE 3000 (revised)	
Identification of the assessment criteria	
Identification and description of subject matter	
Risk and materiality assessment	
Summary of work performed	
Limitations (where appropriate)	
Restrictions on use of the report (where appropriate)	
Opinion (auditor’s conclusion)	
Recommendations given, as appropriate	
Details of the verifier and signature	
Provision of data set (may be included under subject matter)	
Consideration of accuracy and reliability	

- Consideration of controls to prevent fraud or error
- Consideration of frequency and methodology of sampling
- Consideration of data robustness
- Identification if environmental quality assurance certification[†]
- Identification whether restored land bonus included[†]
- Identification emission saving from soil carbon accumulation[†]
- Identification of the installation bioliquid production date[†]
- Independent technical review (not a requirement)

[†] Bioliquids only

8. Appendices

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Appendix 1 – Ofgem’s role as RO administrator

Our role under the Renewables Obligation

1.1. The Renewables Obligation Order 2015 (as amended) and the Renewables Obligation (Scotland) Order (ROS) 2009 (as amended) detail our powers and functions in respect of the Renewables Obligation in England and Wales and in Scotland respectively. Those functions include:

- accrediting generating stations as being capable of generating electricity from eligible renewable energy sources,
- issuing ROCs and Scottish Renewables Obligation Certificates (SROCs),
- establishing and maintaining a register of ROCs and SROCs,
- revoking ROCs and SROCs where necessary,
- monitoring compliance with the requirements of the Orders,
- calculating annually the buy-out price resulting from adjustments made to reflect changes in the Retail Price Index,
- receiving buy-out payments and redistributing the buy-out fund,
- receiving late payments and redistributing the late payment fund,
- publishing an annual report on the operation of and compliance with the requirements of the Orders, and
- forwarding to the Secretary of State a summary of the sustainability information submitted during the obligation period.

1.2. We administer the Northern Ireland Renewables Obligation (NIRO) on behalf of the Northern Ireland Authority for Utility Regulation (NIAUR) under an Agency Services Agreement. Under this agreement the Authority is required to carry out the functions listed above in respect of Northern Ireland Renewables Obligation Certificates (NIROCs). However, the NIAUR continues to retain responsibility under the legislation for administering the NIRO.

1.3. We cannot properly act beyond the scope of the powers laid down in the Orders. For example, we have no remit over the operation or regulation of the ROC market itself. Amendments to the relevant legislation in respect of the Renewables Obligation are a matter for the Secretary of State, Scottish Ministers and the Secretary of State for Northern Ireland.

Legislative and administrative changes

1.4. As the legislation continues to evolve and our administrative processes are developed further, we aim to inform operators of generating stations of the changes and the impact they are likely to have by revising relevant guidance documents or publishing other communication, such as open letters, on our website.

1.5. It should be appreciated, however, that the onus is on operators of generating stations to ensure that they are complying with the RO legislation. Operators of generating stations who are in any doubt as to whether the legislative requirements are being met may wish to seek independent technical and legal advice, as appropriate.

Our approach

1.6. As the RO evolves, Ofgem continue to work in partnership with industry to develop our administrative processes, produce clear and consistent guidance for operators of generating stations and promote good practice. This is achieved by:

- the publication and updating of this guidance document, providing operators of generating stations with guidance and examples of good practice, and
- engagement with stakeholders on key issues, allowing us to gauge industry opinion and shape our guidance and administrative processes accordingly

Appendix 2 – Data Template

- 1.1 Operators of fuelled generating stations are able to extract their fuel and sustainability data, as reported in their monthly output data submission, via a report in their account on the Register. This data should be used to populate the data template below to form the basis of the dataset that needs to be provided to the auditor and included in the report.
- 1.2 To ensure the correct information is passed onto the auditor to verify and included in the audit report, the data should be presented in the two tables below.

Part A: Monthly Biomass Usage

Month	Biomass fuel Use?			If No or Not Applicable - state the reason
	Yes	No	N/A	
Apr-14			X	Station not yet commissioned
May-14			X	Station not yet commissioned
Jun-14	X			
Jul-14	X			
Aug-14		X		Use of fossil fuel only due to biomass delivery disruptions
Sep-14			X	Station offline for maintenance
Oct-14	X			
Nov-14	X			
Dec-14	X			
Jan-15	X			
Feb-15	X			
Mar-15	X			

Part B: Monthly Biomass Data

No.	Period	Biomass fuel Name	Fuel Reference	Quantity		Fuel Classification	Meet Land Criteria			GHG Emissions ³⁶			Voluntary Scheme	Installation bioliquid production date (bioliquids only)
				Measure	Units		Yes	No	Exempt	Actual	Default	Exempt		
1	Jun-15	Used Cooking Oil	B-UC-1	200	litres	Waste			X	95%			N/A	Before 6 October 2015
2	Oct-15	Woodchip	BW-BW-1	400	Tonnes	Forestry residue	X			65.3 gGHG/MJ of electricity			Voluntary Scheme 'A'	N/A
3	Nov-15	Foodwaste	AD-AD-1	300	M ³	Waste			X			X	N/A	N/A
4														

³⁶ The 'actual' column is to be used where either the actual value method or mixed value method has been used for calculating GHG emissions for bioliquids. Where the default percentage method has been used, the value should be entered in the 'default' column. Note, this is only available to bioliquid stations.

Appendix 3 – Glossary

B	
BEIS	Department for Business, Energy and Industrial Strategy
C	
CHP	Combined Heat and Power
D	
DNC	Declared Net Capacity
DfE	Department for the Economy - NI
E	
EC	European Commission
EU	European Union
F	
FMS	Fuel Measurement and Sampling
G	
GHG	Greenhouse gas
I	
IAASB	International Auditing and Assurance Standards Board
ISAE	International Standard on Assurance Engagement
N	
NDA	Non-disclosure agreement
NIAUR	Northern Ireland Authority for Regulation
NIROC	Northern Ireland Renewables Obligation Certificate
NUTs	Nomenclature of Territorial Units for Statistics
O	
Ofgem	Office of Gas and Electricity Markets
R	
RED	Renewable Energy Directive
RO	Renewables Obligation
ROC	Renewables Obligation Certificate
RTFO	Renewable Transport Fuels Obligation
S	
SFM	Sustainability Forest Management
SROC	Scottish Renewables Obligation Certificate
T	
TIC	Total Installed Capacity