ofgem e-serve Making a positive difference for energy consumers

Renewables Obligation (RO)

www.ofgem.gov.uk/ro

Renewable Electricity Team
9 Millbank, London
SW1P 3GE
Email: REDevelopment@ofgem.gov.uk
Date: 3 March 2016

Dear Stakeholder,

OFGEM RENEWABLES OBLIGATION DRAFT FUEL CLASSIFICATION FLOW DIAGRAM

Today we have published a draft fuel classification flow diagram. This diagram will be used in the Renewables Obligation (RO) scheme and it will help generating station operators, auditors and interested parties to classify their fuels. We are publishing this for a four-week consultation, on four questions. The draft fuel classification flow diagram, and corresponding notes are in annex 1.

We are inviting stakeholders to provide feedback on the draft flow diagram. Please provide comments by 31 March 2016 to: REDevelopment@ofgem.gov.uk

Fuel classification has been used in the RO since 2011 and determines whether biomass is a product/co-product, type of residue, or a waste. Fuel classification is important as it determines how to report against the statutory sustainability criteria. Certain fuel classifications have exemptions to the sustainability criteria so it is vital that the classification is determined correctly, and that the operator has appropriate evidence to support their reporting[1].

To date, if an operator proposes using a waste or a type of residue that is not already classified in our common fuel classifications table[2] we will have further discussions with the operator. It is envisaged that this fuel classification flow diagram will provide additional clarity on those fuels that do not have a common classification set out in our guidance. It will allow operators, auditors and interested parties to be more confident in the evidence they collect to demonstrate compliance with the sustainability criteria. It will make processes and decisions more transparent, and ensure greater consistency across fuels, operators and schemes.

The fuel classification flow diagram will be in addition to what is in our guidance and has been created in line with the definitions, considerations and interpretations already set out in the Renewables Obligations Order, the Renewables Energy Directive and subsequent European Commission Communications.

[1] See our RO: Sustainability Criteria guidance, Table 1, for full details on fuel classification reporting requirements under the RO.
[2] RO: Sustainability Criteria guidance, Appendix 3.

We have developed this fuel classification flow diagram with the support of an external consultant and intend to publish the final version of this diagram on our website[3]. It will then be included in our next RO: Sustainability Criteria guidance update.

How to respond

We'd like your answers to the following questions:

1) Are there any aspects of the fuel classification flow diagram that could be made clearer or improved? If so, please provide specific comments including references.

2) Are there any omissions in this fuel classification flow diagram? If so, please provide specific comments.

3) Do you feel that this fuel classification flow diagram is suitably robust and is applicable to all fuels currently used under the RO? If not, please provide specific comments.

4) Would you have any concerns or would any changes be required if this fuel classification flow diagram was also used for other schemes, such as the Non-Domestic Renewable Heat Incentive? If so, please provide comments.

Please send your responses to: REDevelopment@ofgem.gov.uk

This flow diagram is intended to be an administrative tool only and reflects the legislation and processes currently in place. Direct any comments about the underpinning policy to DECC at: www.decc.gsi.gov.uk.

If you want your response to be kept confidential, please clearly mark the document/s as confidential and include your reasons for requesting this. However, this may be subject to any obligations to disclose information, for example, under the Freedom of Information Act 2000 or the Environmental Information Regulations 2004.

Next steps

Once we have considered the responses to this open letter, we will discuss it with our supporting consultants and publish the final version of the fuel classification flow diagram on our website.

Yours sincerely,

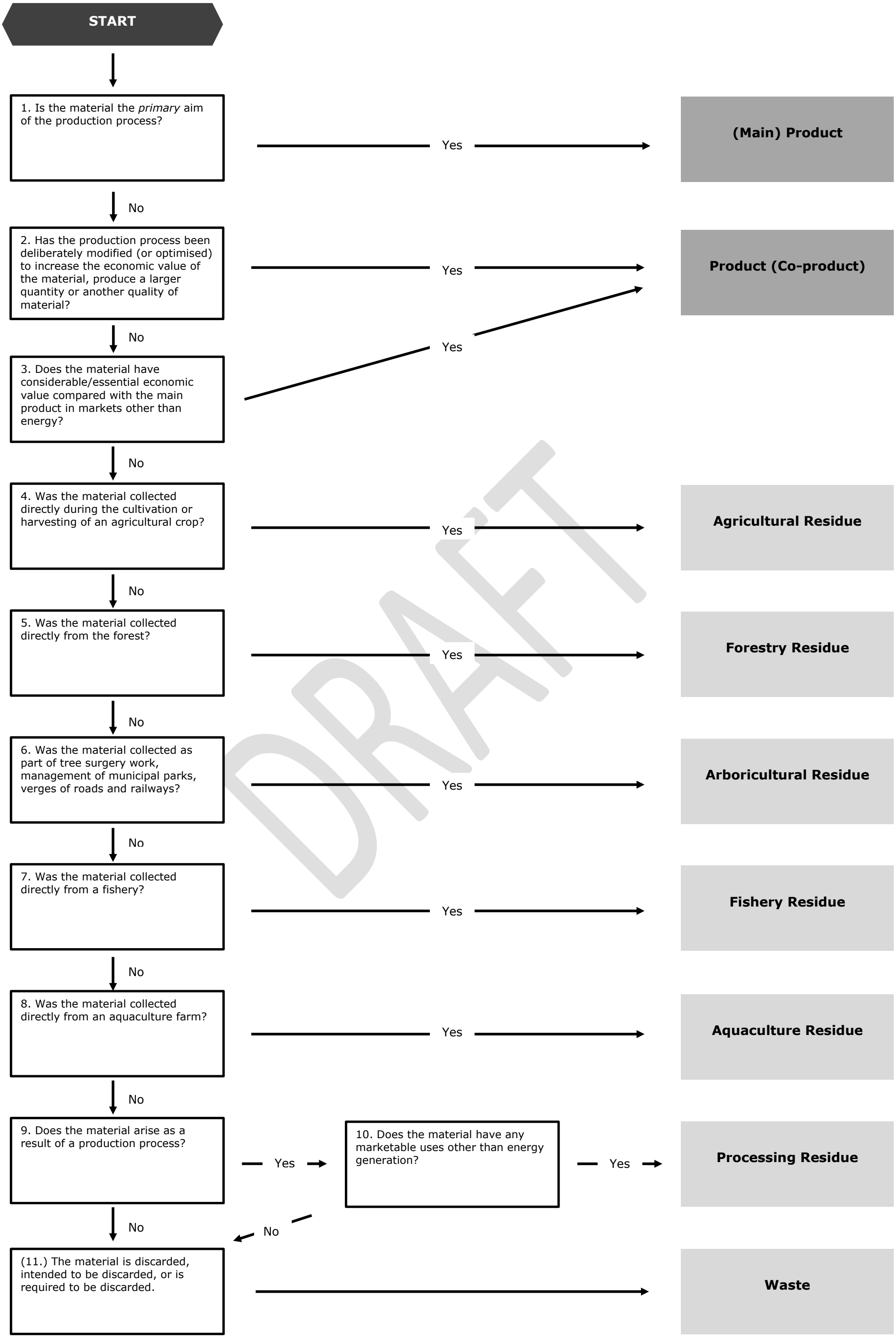
RE Development Team

[3] https://www.ofgem.gov.uk/environmental-programmes/renewables-obligation-ro/information-generators/biomass-sustainability-and-renewables-obligation

Annex 1

Draft Fuel Classification Flow Diagram

Renewables Obligation


START
1. Is the material the *primary* aim of the production process?
Yes
(Main) Product
No
2. Has the production process been deliberately modified (or optimised) to increase the economic value of the material, produce a larger quantity or another quality of material?
Yes
Product (Co-product)
No
3. Does the material have considerable/essential economic value compared with the main product in markets other than energy?
Yes
No
4. Was the material collected directly during the cultivation or harvesting of an agricultural crop?
Yes
Agricultural Residue
No
5. Was the material collected directly from the forest?
Yes
Forestry Residue
No
6. Was the material collected as part of tree surgery work, management of municipal parks, verges of roads and railways?
Yes
Arboricultural Residue
No
7. Was the material collected directly from a fishery?
Yes
Fishery Residue
No
8. Was the material collected directly from an aquaculture farm?
Yes
Aquaculture Residue
No
9. Does the material arise as a result of a production process?
Yes
10. Does the material have any marketable uses other than energy generation?
Yes
Processing Residue
No
No
(11.) The material is discarded, intended to be discarded, or is required to be discarded.
Waste

Fuel Classification Flow Diagram

This note provides guidance on the use of Ofgem's 'Fuel Classification Flow Diagram'. Specific reference is made to the Renewable Obligations Order and European Commission background Directives and Communications, where applicable.

Question no.	Question	Guidance
1.	***Is the material the primary aim of the production process?***	All processes are optimised towards the production of a specific material (ie the primary aim of the production process). This material is classified as the main product. Any remaining materials arising from the process would then be classified as co-products, residues or wastes. At a given moment in time there may be several products that the production is aiming to produce, but there will be only be one main product that the process is optimised for. In practice the relative economic market value of the materials determines the optimisation of the production process. A main product will therefore be economically the most important. The production process can either refer to production that takes place directly in the field (eg cultivation of Short Rotation Forestry, miscanthus), or in industry (eg. virgin oils derived from agricultural crops). **If the answer to this question is Yes, then the material is a Product.**
2.	***Has the production process been deliberately modified (or optimised) to increase the economic value of the material, produce a larger quantity or another quality of material?***	As described above (Q1), all processes are optimised towards the production of the main product. In addition, if the main production process has been "deliberately modified (or "optimised)" to "increase the economic value, or produce a larger quantity or another quality" of a secondary material, then this material should also be classified as a product. (Note that such materials are referred to as co-products in the context of the Renewable Energy Directive). Otherwise, the likely classification of the material is a processing residue in line with the European Commission Communication 2010/C 160/02, clause 5.2: *"A processing residue is a substance that is not the end product(s) that a production process directly seeks to produce. It is not a primary aim of the production process and the process has not been deliberately modified to produce it."* Two methods can be used to determine whether the process has been deliberately modified. These are both based on the input and output mass balance (ie material flows) of the production process. For operational plants, mass balance data should be compared to historical plant performance data to establish whether any variance exists (ie that the process has been "deliberately modified or optimised"). For new production plants, data can be compared to the standard industry

Question no.	Question	Guidance
		configuration for that specific process (or technology type) in the relevant country or region (if more relevant or depending on availability). If the process is deliberately modified (eg due to fluctuating market value) to optimise the main product and another material, the production of both these materials should be regarded as the primary aim of the process, and consequently both materials should be considered co-products. One such example is molasses production (generated from sugar refining), where sugar crystallisation can be forced to a different extent depending on what is most economic. **If the answer to this question is Yes, then the material is a Co-Product.**
3.	***Does the material have considerable/essential economic value compared with the main product in markets other than energy?***	Materials trading at around 15% or more of the value of the main product can be seen as an indicator of economic significance[4]. This value can differ depending on local markets and the extent to which the material is able to be transported. When determining this, the material price on a £/tonne basis[5] should be multiplied by the physical fraction of the material from the produced outputs to take account of the relative quantities of the materials produced. This revenue-based approach avoids that valuable materials would be considered products even if they are only produced in very small quantities, and are therefore not significant for the plant operator in the context of the whole production process. The average annual price of both the main product and material should be considered to take into account price fluctuations (eg due to seasonality). Examples of materials that have considerable economic value compared with the main product include DDGS (Dried Distiller's Grains with Solubles) which is produced during the ethanol production and meal from vegetable oil production. Some materials have an alternative use with a "high-value application" such as being a raw material for the production of chemicals, pharmaceutics or as a key ingredient for animal feed. The further use of the material for energy generation should not impact on these existing markets. **If the answer to this question is Yes, then the material is a Co-Product.**

[4] This approach is consistent with that taken by the Department for Transport. Please refer to footnote 111 of RTFO Part Two: Carbon and Sustainability Guidance Version 8.2, available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/481353/RTFO_guidance_part_two_-_carbon_and_sustainability_guidance_year_8.pdf

[5] For solid biomass the price should be specified on a dry basis (i.e. 0% moisture content).

Question no.	Question	Guidance
4.	***Was the material collected directly during the cultivation or harvesting of an agricultural crop?***	If the material was collected from the field during the cultivation or harvesting of an agricultural crop then it should be classified as an agricultural residue. Agricultural residues include straw, husks, cobs and nut shells. Production of these materials is clearly not the primary aim of the production process. These materials are instead an inevitable consequence of the production of the main product. If the harvested material was removed from the field and generated from related industries or processing then it is no longer classified as an agricultural residue. Such materials are instead considered to be processing residues. In other words, once the product has been harvested and further processing occurs, any residues generated from this are considered processing residues. Standing trees from plantations for non-timber products (eg coconut, rubber, palm trees) which have reached the end of their useful life are considered agricultural residues. **If the answer to this question is Yes, then the material is an Agricultural residue**.
5.	***Was the material collected directly from the forest?***	Forestry residues are derived from "virgin wood" and may include (but not limited to) materials such as tree tops, branches, brash, clippings, trimmings, leaves, bark, shavings, woodchips and saw dust from felling. Forestry residues also include: • virgin wood that has been felled due to damage from insect nests or blight which damages the tree and/or may spread disease to other trees/organisms and is of little value other than for energy; • wood that has been damaged by fire and so has no other market than for energy; and • wood from trees that have been uprooted or damaged during hurricanes or storms and is of little value other than for energy. Forestry residues do not include any residues from related industries, or residues associated with processing the material (eg sawdust from saw mills). Such materials are instead considered to be processing residues. **If the answer to this question is Yes, then the material is a Forestry residue**.
6.	***Was the material collected as part of tree***	If the material was collected directly as part of tree surgery work usually in gardens, management of municipal parks or other populated settings, verges of roads and railways, then it should be classified as an arboricultural residue.

Question no.	Question	Guidance
	surgery work, management of municipal parks, verges of roads and railways?	Arboricultural residues are considered to be material from woody plants and trees only, and not grass or other biomaterial. Arboricultural residues from arboriculture should not include forestry residues. **If the answer to this question is Yes, then the material is an "Arboricultural residue"**.
7.	***Was the material collected directly from a fishery?***	If the material was collected directly from a fishery then it should be classified as a fishery residue. Fishery residues do not include any residues from related industries, or residues associated with processing the material (eg fish residues from the fish canning industry). Such materials are instead considered to be processing residues. **If the answer to this question is Yes, then the material is a "Fishery residue"**.
8.	***Was the material collected directly from an aquaculture farm?***	If the material was collected directly from an aquaculture farm then it should be classified as an aquaculture residue. Aquaculture residues do not include any residues from related industries, or residues associated with processing the material. Such materials are instead considered to be processing residues. **If the answer to this question is Yes, then the material is an "Aquaculture residue"**.
9.	***Does the material arise as a result of a production process?***	Any remaining materials arising from the main production process should be classified as either a processing residue or waste, depending on the outcome of Q10. If the material did not arise from a production process, then by default it is an end-of-life waste material (eg post-consumer waste wood). **If the answer to this question is Yes, then the material may be either a "Processing residue" or "Waste" (depending on the answer to Q10).**
10.	***Does the material have any marketable uses other than energy generation?***	The answer to this question can differ depending on local markets and the extent to which the material is able to be transported. Some materials arising from a production process have an alternative use, other than energy generation, such as being a raw material for the production of chemicals, pharmaceutics or as an ingredient for animal feed.

Question no.	Question	Guidance
		When determining whether the material has other uses, consideration of access/distance to the market should also be considered. The distance to market has an implication on the transport cost, which for low value materials may imply that it is not economic for the material to be sent to that market. It is then likely that the material will be discarded instead of being used. **If the answer to this question is Yes, then the material is a Processing residue, otherwise it is a "Waste".**
(11.)	***The material is discarded, intended to be discarded, or is required to be discarded.***	According to the Renewables Obligation Order 2015, "*waste has the meaning given in Article 3(1) of Directive 2008/98/EC of the European Parliament and of the Council on waste but—(a) also includes anything derived from waste, and (b) does not include landfill gas or sewage gas"*. Article 3(1) of Directive 2008/98/EC (otherwise known as the "Waste Framework Directive") defines waste as, "any substance or object which the holder discards or intends or is required to discard". The term "discard" has a specific extended meaning in the context of the Waste Framework Directive and includes the "recovery" (including "recycling") of a substance or object, as well as its "disposal" (eg to landfill). The holder of a material may be regarded as discarding a substance or object if they are carrying out a "recycling" or other recovery operation in the course of their business even though the substance or object has a commercial value to them. Furthermore, it makes no difference whether a disposal or recovery operation is carried out by the person who produced the waste or someone else. Finally, although the Renewable Energy Directive itself does not include a definition of waste, clause 5.2 of Communication 2010/C 160/02, further clarifies that "wastes include materials that have to be withdrawn from the market for health or safety reasons", and "furthermore that raw materials that have been intentionally modified to count as waste (eg by adding waste material to a material that was not waste) should not be considered as qualifying." **The material is a "Waste"**.