

Waste feedstocks under the Liquid Fuel Supply Regulation 2016

Guideline

Prepared by: Department of Environment and Science

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Contents

1. Purpose.....	4
2. Defining waste	5
3. Deciding whether a material will be treated as a waste under the Liquid Fuel Supply regulation 2016	7
4. Feedstock specific guidance.....	9
4.1 Sugarcane as a biofuel feedstock.....	9
4.2 Oil palm as a biofuel feedstock	9
4.3 Other agricultural and forestry residues as a biofuel feedstock.....	9
4.4 Treatment of other biofuel feedstocks.....	9
4.4.1 Materials designated as 'regulated wastes' under Queensland legislation.....	10
4.4.2 General waste materials under Queensland legislation.....	10
4.4.3 Waste biomass	10
5 Link with "end of waste resource"	12
5.1 The End of Waste framework.....	12
5.2 End of Waste framework and the sustainability criteria	12
6. Further information	13

1. Purpose

This document applies to materials used to produce sustainable biofuels to be counted under the Queensland biofuels mandate. It provides guidance on identifying which feedstocks will be treated as wastes under the biofuels mandate sustainability criteria prescribed in the [Liquid Fuel Supply Regulation 2016](#) (the Regulation). **Materials treated as wastes under the Regulation are only required to meet the greenhouse gas criterion (explained further below).**

This guideline does not affect the meaning of waste or its treatment under the existing legislative and policy framework. Wastes, including their use in producing biofuels, continue to be managed under Queensland's existing environmental laws, including the *Environmental Protection Act 1994*, the Environmental Protection Regulation 2008 and the *Waste Reduction and Recycling Act 2011*. This includes waste transport, storage, management and treatment requirements.

The biofuels mandate sustainability criteria contain two requirements:

1. a greenhouse gas criterion, which applies to all biofuels; and
2. a feedstock specific sustainability standard, which varies depending on the feedstock from which the biofuel is made (excluding wastes).

Please see the [overview of the sustainability criteria](#) for further information about the criteria.

Biofuels produced from a waste only need to meet the greenhouse gas criterion. No other sustainability standards apply under the Regulation. **Materials that are covered by a Beneficial Use Agreement (BUA), End of Waste Code (EOWC) or an End of Waste Approval (EOWA) will only need to meet the greenhouse gas criterion under the Regulation.** These policy settings are designed to encourage the production of biofuels from legally obtained waste streams. **Table 1** summarises the relevant sustainability requirements for each feedstock type.

Feedstock specific sustainability criteria have been prescribed for biofuels produced from sugarcane and oil palm feedstocks (see **Table 1**). The guideline is designed to provide guidance on materials which are not sugarcane or oil palm. It can be difficult to decide whether by-products, production residues and surplus materials are waste materials. This is because industrial and agricultural processes are often complex and generate materials with differing economic, environmental and waste values.

Table 1: summary of sustainability requirements by feedstock type

Feedstock	Applicable sustainability requirements
Waste materials	Greenhouse gas criterion (only)
Materials covered by a Beneficial Use Agreement, End of Waste Approval or End of Waste Code	Greenhouse gas criterion (only)
Sugarcane	Greenhouse gas criterion Smartcane BMP accreditation
Oil palm	Greenhouse gas criterion Roundtable on the Sustainable Biomaterials (RSB) certification
Other feedstocks (not including waste, sugarcane or oil palm)	Greenhouse gas criterion Roundtable on the Sustainable Biomaterials (RSB) certification or International Sustainability and Carbon Certification system (ISCC) certification

2. Defining waste

Under the Regulation, waste has the same meaning as section 13 of the *Environmental Protection Act 1994* (EP Act). The sustainability criteria are intended to draw on the existing legislative and policy framework for managing waste in Queensland (see **Box 1**).

Box 1: Definition of waste

Section 13 of the *Environmental Protection Act 1994* defines waste as follows:

(1) Waste includes any thing, other than an end of waste resource, that is—

- (a) left over, or an unwanted by-product, from an industrial, commercial, domestic or other activity; or
- (b) surplus to the industrial, commercial, domestic or other activity generating the waste.

Example of paragraph (a)—

Abandoned or discarded material from an activity is left over, or an unwanted by-product, from the activity.

(2) Waste can be a gas, liquid, solid or energy, or a combination of any of them.

(3) A thing can be waste whether or not it is of value.

(4) Despite subsection (1), an end of waste resource becomes waste—

- (a) when it is disposed of at a waste disposal site; or
- (b) if it is deposited at a place in a way that would, apart from its use under an end of waste code or end of waste approval, constitute a contravention of the general littering provision or the illegal dumping of waste provision under that Act—when the depositing starts.

(5) In this section—

end of waste approval see the Waste Reduction Act, section 156.

end of waste code see the Waste Reduction Act, section 156.

end of waste resource means a resource under the Waste Reduction Act, section 156.

waste disposal site see the Waste Reduction Act, section 8A.

Waste Reduction Act means the *Waste Reduction and Recycling Act 2011*.

Under section 13 of the *Environmental Protection Act 1994*, a material is considered a waste provided it can be classified as left over, or an unwanted by-product, or surplus, to an activity. The section 13 definition is broad and inclusive, so it may not always be clear from this definition if a feedstock used for biofuel production and sale under the biofuels mandate is a waste.

Some materials are clearly wastes as they are also defined as regulated wastes under section 65 and schedule 7 of the [Environmental Protection Regulation 2008](#) (EP Reg). These materials are considered wastes under the sustainability criteria.

Some examples of regulated wastes that are also potential biofuel feedstocks include:

- animal effluent
- food processing waste
- grease trap waste
- tallow
- tyres
- vegetable oil
- animal effluent
- food processing waste
- grease trap waste

- tallow
- tyres
- vegetable oil.

Sections 3 and 4 below have been developed to provide practical guidance in determining whether a potential biofuel feedstock will be treated as a waste under the Regulation.

Section 5 assists in clarifying the interaction of the sustainability criteria with the End of Waste framework introduced under the *Waste Reduction and Recycling Act 2011*.

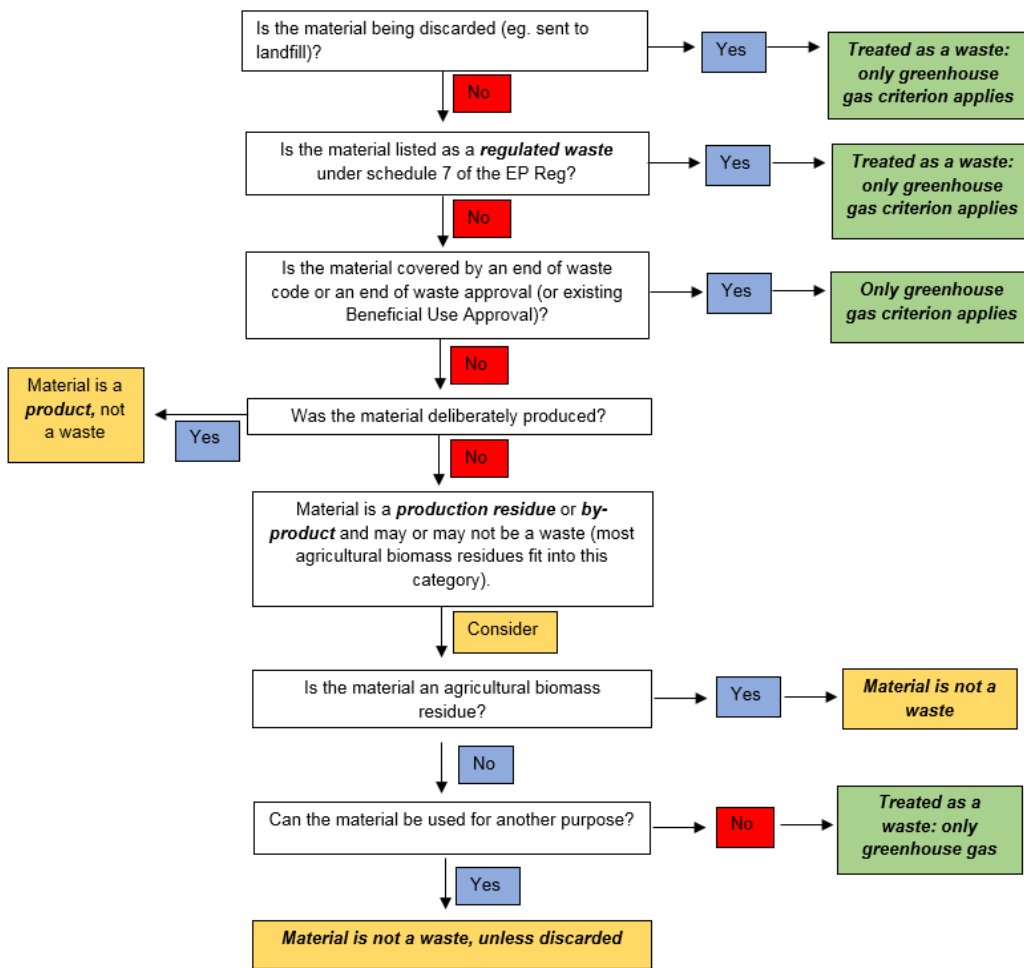
3. Deciding whether a material will be treated as a waste under the Liquid Fuel Supply regulation 2016

The decision tree in Figure 1 is designed to be a guiding tool only, and it is recommended that advice from EHP is still sought on the classification of a specific feedstock. It provides a step-by-step guide for determining whether or not a material will be treated as a waste under the Regulation.

To use the decision tree, answer the questions beginning at the top of the page until the material is categorised as treated as a waste or non-waste material.

One of the questions in the decision tree applies to the End of Waste framework introduced under the *Waste Reduction and Recycling Act 2011*. Please see Section 5 for more information and clarification on this framework and its relationship with the sustainability criteria.

Figure 1: Decision-tree for deciding whether a material will be treated as a waste under the biofuels mandate



4. Feedstock specific guidance

This section provides guidance on whether a number of materials are treated as wastes when used as feedstocks for biofuel production. Importantly, as per the definition under the *Environmental Protection Act 1994*, if any of these materials are discarded or surplus to an activity they will be generally be considered and treated as a waste. In the manufacturing and industrial context, an array of different materials fall into this area.

4.1 Sugarcane as a biofuel feedstock

Biobased petrol produced from sugarcane feedstock is dealt with specifically in the Regulation. Sugarcane is a discrete feedstock that is **not treated as a waste** under the Regulation. This extends to all feedstocks derived from sugarcane, including feedstocks that are by-products or residues of the sugarcane growing or refining process (including trash, tops and bagasse).

Biofuels produced from sugarcane feedstock must comply with the greenhouse gas criterion **and** be appropriately certified under the Smartcane BMP sustainability standard to comply with the sustainability criteria.

4.2 Oil palm as a biofuel feedstock

Biobased petrol and diesel produced from oil palm is dealt with specifically in the Regulation. Oil palm is a discrete feedstock that is **not treated as a waste** under the Regulation. This extends to all feedstocks derived from oil palm, including feedstocks that are by-products or residues of the palm oil refining process.

Biofuels produced from oil palm feedstock must comply with the greenhouse gas criterion **and** be appropriately certified under the RSPO standard to comply with the sustainability criteria.

4.3 Other agricultural and forestry residues as a biofuel feedstock

The primary production of biomass **on the farm or in the forest is not considered a waste** under the Liquid Fuel Supply Regulation 2016. These residues can have value on-farm and in the forest, such as contributing to soil and water quality management outcomes, which are often reflected in Best Management Practice (BMP) systems or programs.

Managing agricultural and forestry residues in line with relevant BMPs is strongly encouraged, as BMPs are designed to deliver improved profitability and sustainability for the business. BMPs often include practices for retaining or using biomass residues on farm or in the forest.

This guideline does not affect the management of forests or forest harvesting residues. Forestry practices operate under existing codes of practice, which should be used when considering using forestry residues for biofuel production. For example:

- harvesting activity on State-owned native (or crown) forests is guided by the *Code of practice for native forest timber production on the QPWS forest estate*.
- harvesting activity on private land is guided by the *Managing a native forest practice: A self-assessable vegetation clearing code* (noting that users of this code must comply with the practices of the code).

See Table 4 (section 4.4) for guidance on declared weeds and residues produced from off-farm and forest primary processing.

4.4 Treatment of other biofuel feedstocks

This section provides guidance on the classification and treatment of some potential biofuel feedstocks not covered by sections 4.1 to 4.3. If your potential biofuel feedstock is not captured in these tables, please refer to the decision tree and this section generally for guidance.

4.4.1 Materials designated as 'regulated wastes' under Queensland legislation

Materials designated as regulated wastes under the Environmental Protection Regulation 2008 will be **treated as wastes**. Examples of regulated wastes that can be used to produce biofuels are shown in Table 2.

Table 2: Example regulated wastes

Feedstock	Explanation
Used cooking oil	Designated as regulated wastes under the Environmental Protection Regulation.
Tallow	
Agricultural manure, e.g. cow, pig and chicken manure	
Tyres	
Grease trap waste	

4.4.2 General waste materials under Queensland legislation

Wastes other than regulated wastes are referred to as general wastes under the Environmental Protection Regulation 2008. Commercial, domestic and recyclable wastes managed by local governments are also known as general wastes. Headline wastes, including three main waste source streams (explained in Table 3 below) will be **treated as wastes**.

Table 3: General waste

Feedstock	Explanation
Municipal solid waste (MSW)	A source stream combining domestic waste and other wastes arising from council activities, and is captured as a general waste under Queensland legislation.
Commercial and industrial waste	A source stream produced by business and commerce, and is captured as a general waste under Queensland legislation.
Construction and demolition waste	A source stream of non-putrescible (non-decaying) waste arising from construction or demolition activity, and is captured as a general waste under Queensland legislation.

4.4.3 Waste biomass

Some materials are considered unwanted by-products, and as they are generally not useable for any other purpose, they will be **treated as wastes**.

Table 4: Waste biomass feedstocks

Feedstock	Explanation
Declared weed residues	Cleared invasive species, such as prickly acacia, will generally be considered wastes. Weed management and other land management law and regulations still apply to clearing of invasive native species.

Primary processing residues	<p>Residues produced during off-farm primary processing of agricultural and forestry biomass will generally be treated as wastes.</p> <p>Examples include sawmill forestry residues and cotton gin trash. Gin trash is often recycled as a compost resource. However, where gin trash would otherwise be disposed of, it is an unwanted by-product from cotton processing.</p>
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5 Link with "end of waste resource"

Materials that are covered by an End of Waste Code (EOWC) or an End of Waste Approval (EOWA) will only need to meet the greenhouse gas criterion under the Regulation.

5.1 The End of Waste framework

Under section 13 of the *Environmental Protection Act 1994*, a material is not a waste if it falls within the meaning of an 'end of waste resource'. Chapter 8 of the *Waste Reduction and Recycling Act 2011* (WRR Act) makes provision for when a waste ceases to be a waste and becomes a resource for a specified purpose.

Under the WRR Act, a waste becomes a resource when:

- a registered producer manages the waste in accordance with an end of waste code (EOWC); or
- a holder of an end of waste approval (EOWA) manages the waste in line with the approval.

The new EOWC/EOWA framework replaced the general and specific beneficial use approval (BUA) framework.

Each specific BUA in effect at the commencement of EOW, continues to be in effect for the term specified in the BUA.

The EOW framework provides a definitive end point, beyond which a waste will be considered a resource and will not be subject to waste management controls. That is, once a waste is deemed a resource for a specified purpose, it will not be treated differently to an equivalent resource that is not derived from waste (**except under the sustainability criteria, explained in section 5.2**). Resources derived from waste may be subject to other controls such as any legislation relevant to the resource, and are subject to the general environmental duty.

5.2 End of Waste framework and the sustainability criteria

Materials that are covered by an EOW code or approval will only need to meet the greenhouse gas criterion under the Liquid Fuel Supply Regulation 2016.

This is because:

- the policy intent of the Regulation is to encourage the production of biofuels from legally obtained waste streams, including those covered by the EOW framework; and
- a key policy objective of the WRR Act is to encourage the use of recovered materials which may have otherwise been sent to landfill, and this is enacted through the End of Waste framework.

6. Further information

For further information please contact the department by email on info@des.qld.gov.au, phoning 13QGOV, or visiting the Queensland Government website at www.qld.gov.au.