



Department
of Energy &
Climate Change

Mass Balance Guidance

9 September 2014

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Introduction

To facilitate accounting methods of sustainable and legal woodfuel supplies, the Timber Standard allows the use of the mass balance approach (MBA) in the mixing of raw materials and of woodfuel.

The Timber Standard requires that under the RO and CfD **generators** must ensure that at least 70% of their woodfuel use (by volume or weight) is from a *legal and sustainable* source with the balance from a *legal source*. It is the responsibility of the generator to ensure that the woodfuel mix meets this threshold. Suppliers to these generators do not need to meet the 70% legal and sustainable, but all their wood must meet the definition of legal, and they may need to provide evidence of an effectively operating mass balance system in order to ensure that their customer can provide a credible guarantee of the mix of legal and sustainable material in the woodfuel that they use.

Suppliers who wish to be registered on the RHI Biomass Suppliers List (BSL) need to demonstrate that the woodfuel they supply meets the 70%-30% threshold. Heat generators buying from a BSL supplier do not need to demonstrate that they meet the TS requirements.

Generators¹ using either **Timber Standard Category A (TS Cat A)** and **Timber Standard Category B (TS Cat B)** of compliance for a woodfuel consignment will be able to use the MBA across the feedstock supply-chain as well as within the fuel storage bunkers at the generating station or heat installation. Raw material and woodfuel carrying a percentage claim from a TS Cat A may also be mixed with other inputs. The MBA requires that, at each step in the chain, parties can only use or sell biomass with the same sustainability characteristics and in the same volume as the biomass they took in originally, less any biomass they have recorded as being used or sold previously.

If you are a biomass supplier on the Biomass Suppliers List (BSL), compliance with the Timber Standard will be assessed by the List Administrator. For BSL suppliers calculation of % inputs are made on a delivered in basis (i.e. 1 tonne of wet or dry round wood mixed with 1 tonne of sawdust would be a 50:50 mix for purposes of the TS 70%-30% calculation). Further guidance on the applications and audit processes for self-suppliers provided by the Biomass Suppliers List Website.

For generators operating under the RO and CfD, woodfuel calculation of % inputs are required to be calculated as oven dried equivalent weight of inputs (i.e. 1 tonne of wet or dry round wood chips mixed with 1 tonne of sawdust would need to be converted to oven dry equivalent weights for purposes of the TS 70%-30% calculation). Calculations must be made on an accredited unit (site) basis and calculations cannot include material used at other accredited units.

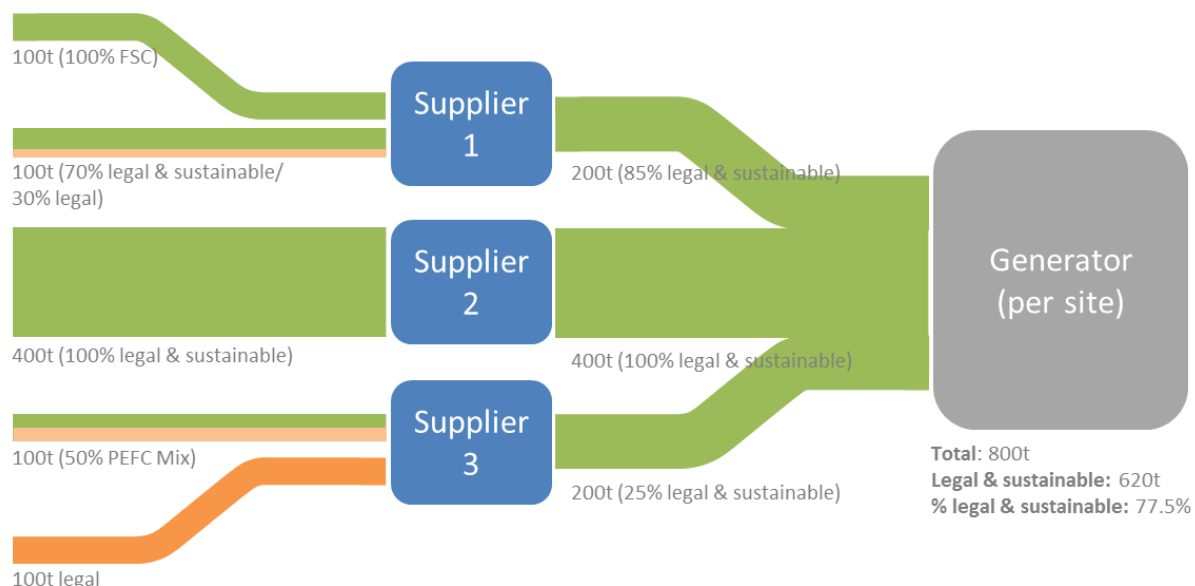
¹ This includes participants of the Renewables Obligation (RO), Renewable Heat Incentive (RHI) and the Contracts for Difference (CfDs)

Suppliers may pass on raw material and woodfuel which state the percentage of the material that is both legal and sustainable or only legal. This allows the generator to calculate the legal and sustainable proportion in the mix that they receive.

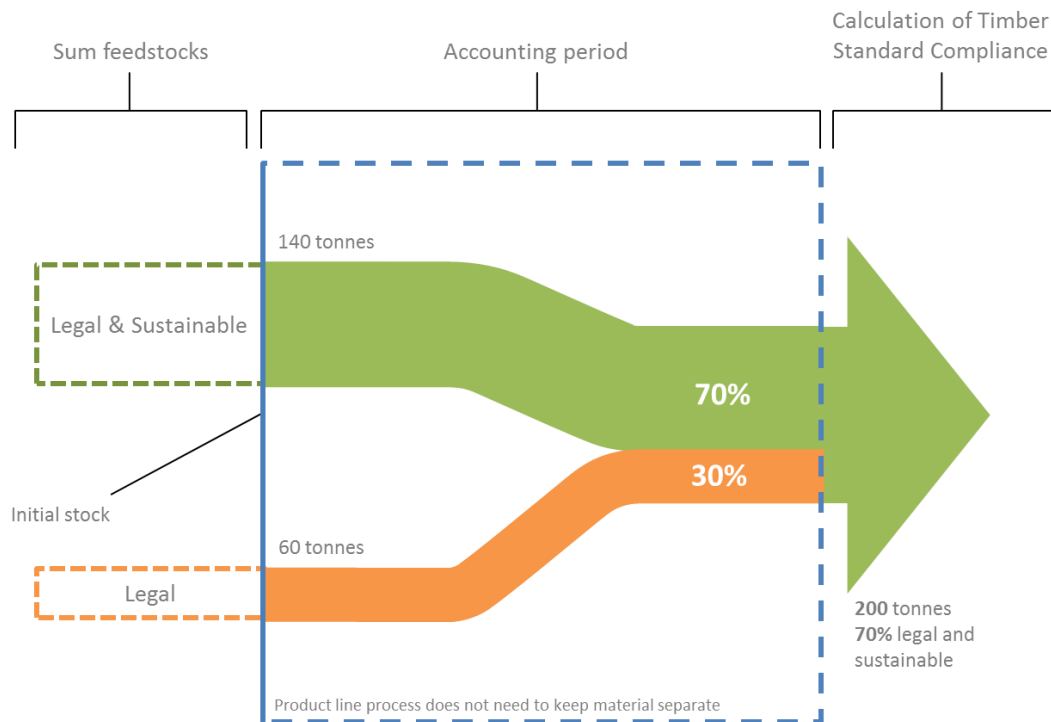
As stated in the *Woodfuel Advice Note* document, compliance with legality and sustainability criteria can be demonstrated through either Timber Standard Category A or Timber Standard Category B evidence. The MBA differentiates between the proportion of legal and sustainable versus legal material, as it is a tool for generators and suppliers to be able to respect the 70%-30% threshold. The MBA does not differentiate between Timber Standard Category A or B evidence, it is the 'legal and sustainable' and 'legal only' claims that are relevant.

All raw material and woodfuel must meet the EU Timber Regulation No 995/2010 requirements for legality.

For example, for a generator operating under the RO or CfD. This generator can demonstrate that the woodfuel they use meets the 70%-30% threshold, through a variety of means, as shown in the diagram. Note that the generator has to make mass balance calculations on an accredited unit (site) basis.



For example, for a BSL supplier operating under the RHI. This supplier can demonstrate that the 200t of woodfuel that they supply meets the 70%-30% threshold.



Other criteria

In order to supply under the RO, RHI and CfD, there are other criteria which have to be met, including the greenhouse gas savings criteria. This document seeks to provide guidance only on complying with the land criteria (including meeting the minimum 70% legal and sustainable criteria as set out in the Timber Standard) through a mass balance system. It does not set out how using wastes, residues and co-products can be combined with virgin wood to meet the greenhouse gas savings criteria. Generators and suppliers should consult relevant guidance for further information.

Why should I use this guidance?

This guidance will provide you with information to help ensure that you are meeting the mass balance requirements of the Timber Standard. The guidance explains what the MBA is and what steps you will need to take in order for you to implement it.

When do I need to use a mass balance approach?

Depending on the nature of your supply of woodfuel material, the MBA may be convenient for you to demonstrate compliance with the Timber Standard. For instance operating a MBA may be necessary if you;

- do not have 100% or do not always source legal and sustainable material
- buy from many different sources of woodfuel
- have limited internal processes to avoid mixing of legal and sustainable and sustainable material

- already account for some or all of your woodfuel using mass balance methods (including mixing or credit systems)

What do I need to demonstrate?

Generators need to demonstrate that the balance of the woodfuel used in an accounting period meets a threshold of at least 70% from legal and sustainable sources with the remainder from legal sources.

The requirements apply at each individual accredited site.

The maximum permissible accounting period is the best available information for the previous 12 month period. For generators under the RO the period needs to coincide with the obligation year under the RO (April to March).

For new generators which have been operating for less than 12 months the accounting period will be a period of less than 12 months.

Suppliers of raw material and woodfuel will need to be able to demonstrate that any claims made on the percentage of sustainable and legal material within raw material or woodfuel that they supply are justified.

What evidence can I use to demonstrate compliance?

Where material is supplied under Timber Standard Category A, evidence that the material is supplied within the scope of a valid chain of custody certificate would be adequate.

Where raw material and woodfuel is supplied outside of the scope of a Timber Standard Category A scheme then evidence of operating an effective MBA along the supply chain is required (i.e. as part of the Timber Standard Category B evidence).

In such a case, the CPET Practical Guide “Supply Chain practical guide for Category B evidence”, January 2007², provides additional guidance on appropriate evidence in supply chains.

The approved Timber Standard certification schemes (currently just FSC and PEFC) and other schemes specific to biomass, such as Green Gold Label (GGL), Roundtable on Sustainable Biomaterials (RSB) and Sustainable Biomass Partnership (SBP), have clear requirements for effective MBA control systems.

For more information please see the documents *Woodfuel Advice Note* and the *Checklist for Regional Supply Base Evaluation*.

Do I need to have my evidence verified?

If you are a generator reporting directly to Ofgem you need to demonstrate in your sustainability audit report to Ofgem that the woodfuel you have used meets the sustainable forest management criteria for woodfuel set out in the Timber Standard. If you have used a MBA in the supply chain then the reporting must include setting out evidence for reaching the threshold of 70% legal and sustainable and 30% legal material. The evidence that you provide will be verified by the independent third party auditor who audits your sustainability audit report and is accredited to an ISAE 3000 or an equivalent standard.

² <https://www.gov.uk/government/publications/forestry-supply-chain-check-category-b-evidence>

If you are registered on the RHI Biomass Suppliers List (BSL), you will be required to demonstrate to the BSL Administrator that you operate an effective MBA and that the claims you make about compliance with the Timber Standard on Raw Material and woodfuel are justified.

Who does not need to use a mass balance approach?

If you are a supplier who also supplies material to comply with the UK government's Timber Procurement Policy (TPP) then you will be unable to use the MB approach to fulfil the TPP's requirements, as the TPP does not permit using a MBA.

Note, generators and suppliers do not necessarily need to use a MBA where they *only use sustainable and legal material* as all their material is sustainable and legal.

The mass balance approach

What does the mass balance approach mean?

The MBA is a means of accounting for the flows of woodfuel material using a defined system and during a defined period of time. The time period is defined by the organisation operating the system but shall be no more than 12 months. Starting from the beginning of an accounting period (initial stock), the MBA allows you to account (by volume or weight) for the flows in and out (that you buy and sell) of both legal and legal and sustainable woodfuel. The MBA is a tool for ensuring the correct accounting of the required *minimum* thresholds of 70% legal and sustainable source and a *maximum* of 30% from a legal source. The MBA also enables material which cannot meet the Timber Standard (for example material from unknown origin) to be excluded from woodfuel. The MBA enables material with differing percentages of legal and sustainable content to be mixed.

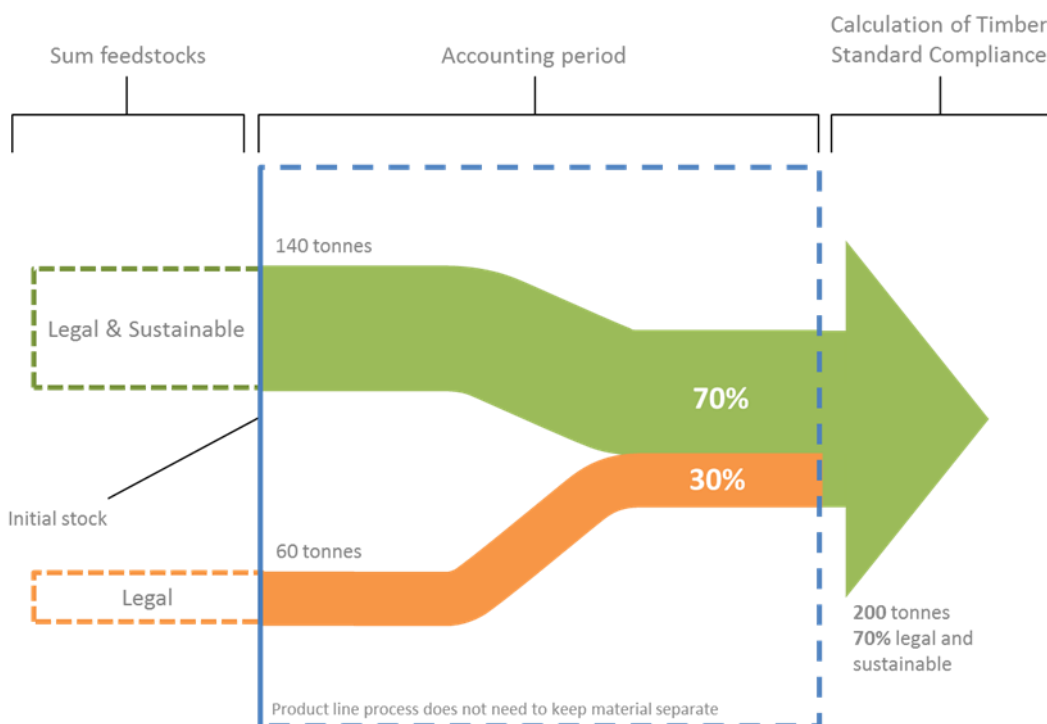
The MBA must account for any losses during any processing or transformational steps, such as process conversion rates or unit conversion factors.

The MBA can combine flows of raw material and woodfuel carrying both Timber Standard approved certification scheme claims (TS Cat A) and bespoke forms of evidence (TS Cat B) over the accounting period.

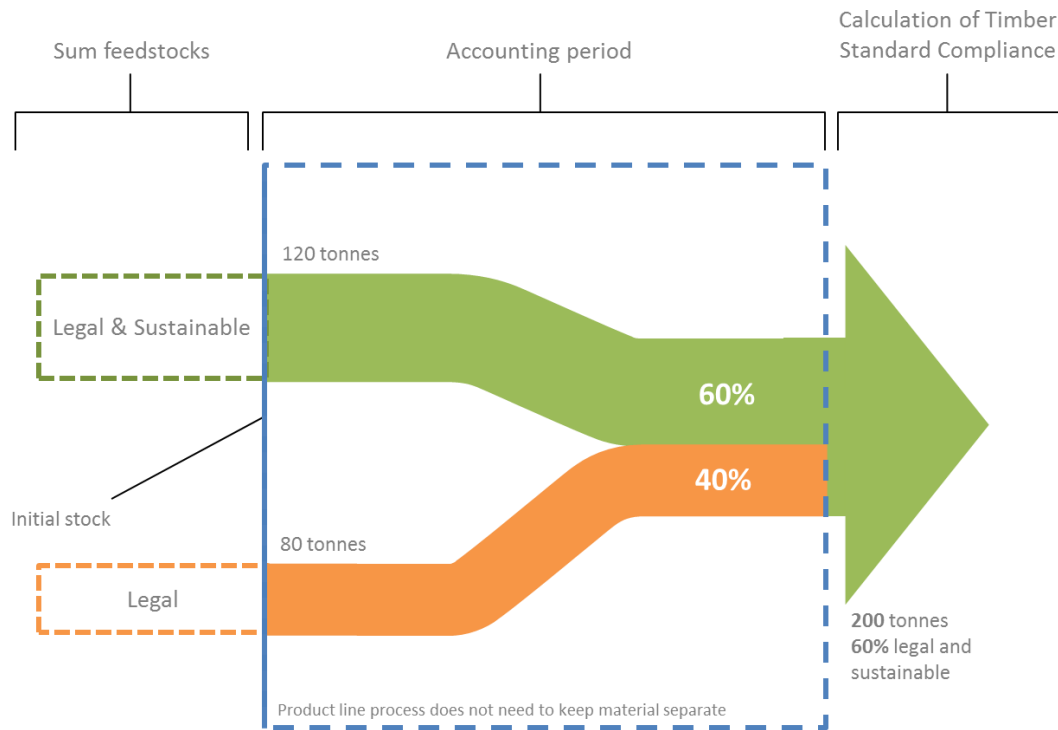
How does it work?

Various scenarios have been presented in this section which indicate how the MBA works from the perspective of both suppliers and generators.

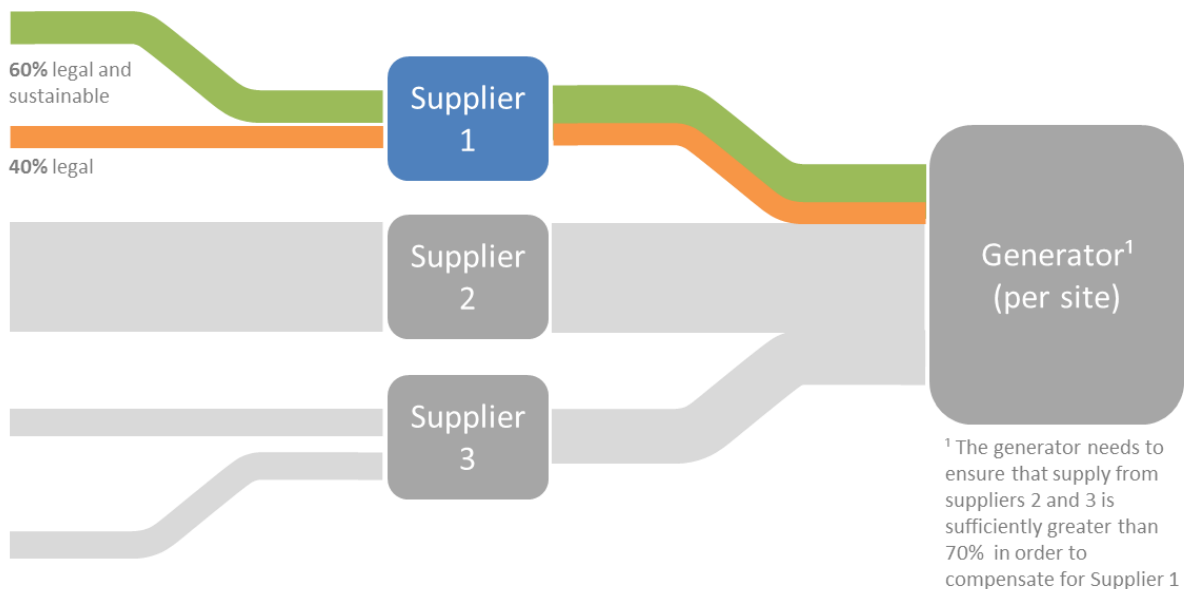
Example 1a) Wood fuel (200t) supplied by a BSL supplier over the accounting period carrying a 70% Timber Standard legal and sustainable claim.



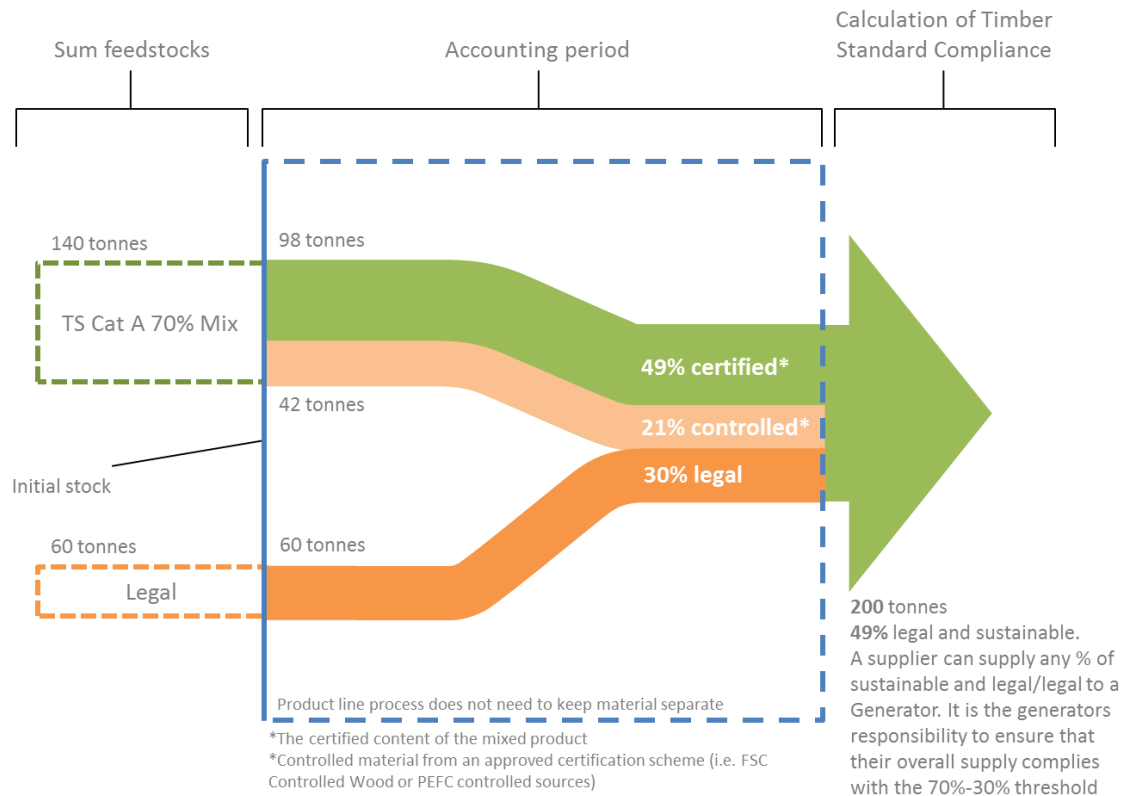
Example 1b) Woodfuel (200t) supplied by a supplier over the accounting period carrying a 60% Timber Standard legal and sustainable claim. A BSL supplier **cannot** supply this material under the RHI. A supplier to a generator under the RO or CfD can supply this material with a 60% ratio TS legal and sustainable to legal mix claim.



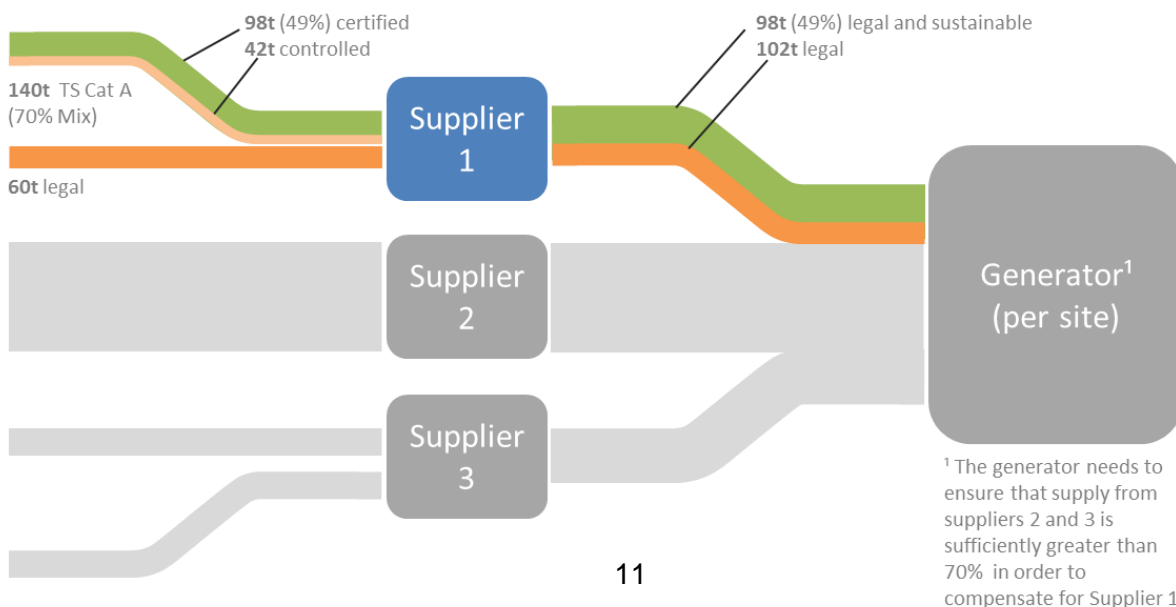
Example 2) Woodfuel from a supplier can be supplied at any ratio of legal and sustainable and legal only to a **generator under the RO or CfD**. It is the **generator's** responsibility to ensure the overall supply they use over the accounting period meets the 70%-30% legal and sustainable threshold on an accredited unit (site) basis.



Example 3a) For material supplied with a **mixed claim** from a Timber Standard Category A scheme: Only the proportion that fully meets the scheme’s own sustainability criteria can be considered legal and sustainable. The remaining proportion can be considered legal where it has been assessed to comply with the Category A legality criteria. This proportion can be considered to be ‘Controlled’ for the TS legality requirements. In this example a BSL supplier **could not** supply this material under the RHI. A supplier to a generator under the RO or CfD can supply this material with a 49% ratio TS legal and sustainable to legal mix claim.

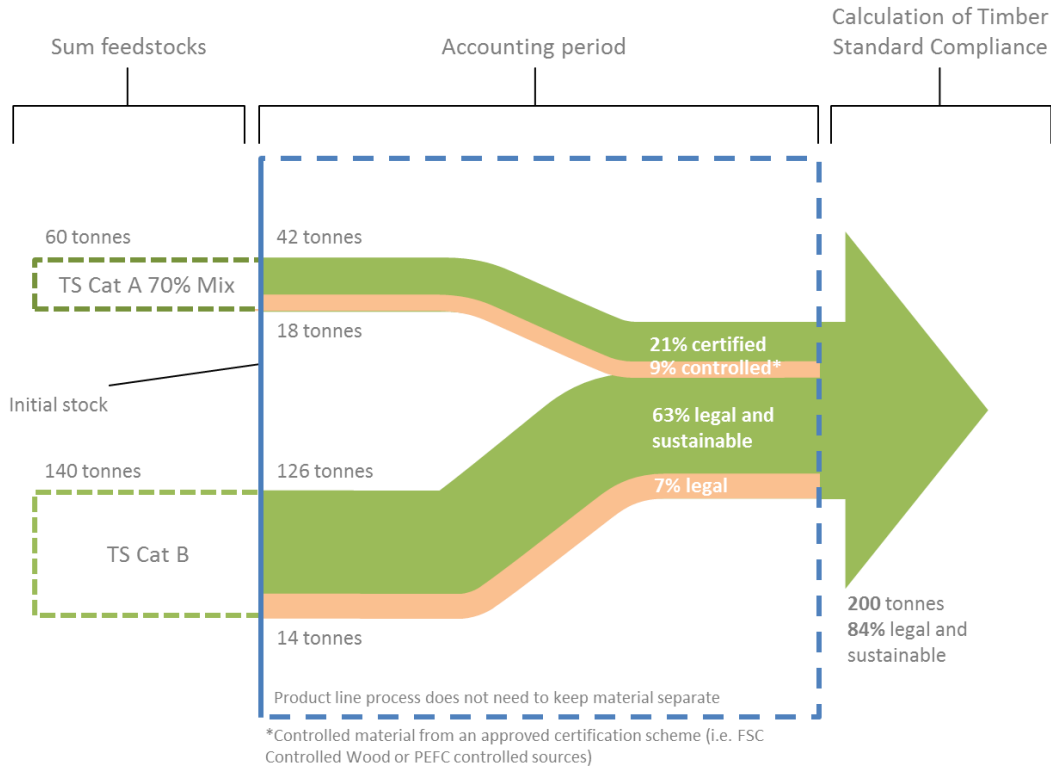


Example 3b) For material used by a generator under the RO or CfD received with a mixed claim from a Timber Standard Category A scheme only the proportion that fully meets the scheme’s own sustainability criteria can be considered legal and sustainable. The remaining proportion can be considered legal. In this example, the supply from suppliers 2 and 3 would

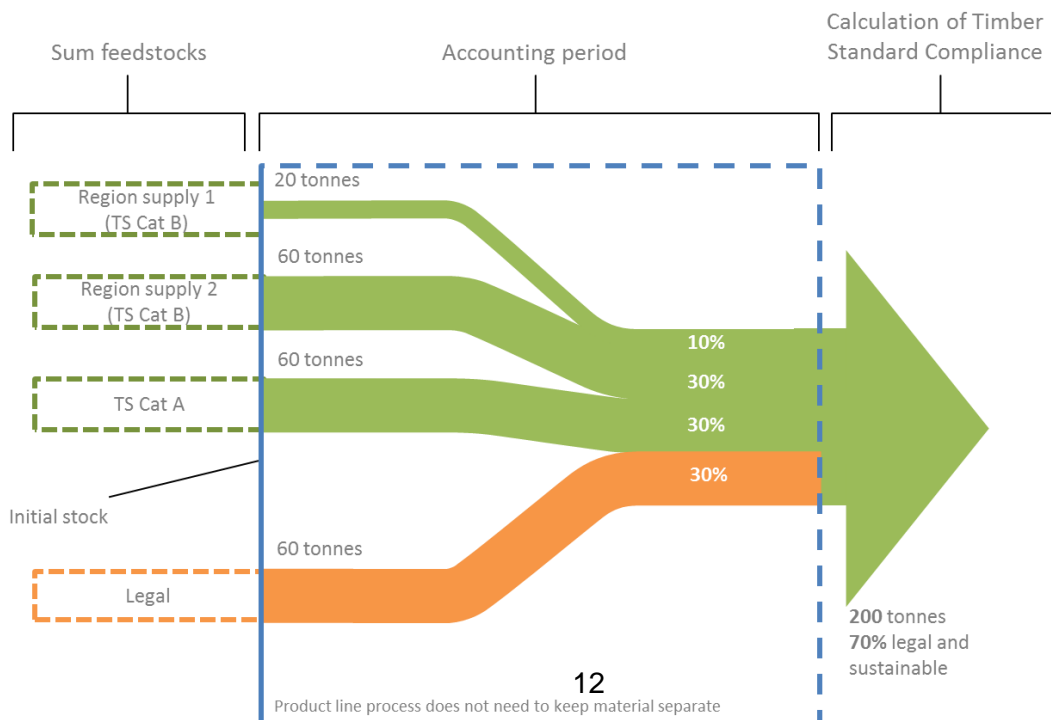


need to bring the total woodfuel supplied above the 70%-30% threshold.

Example 4) Suppliers and generators are able to mix various sources of legal and sustainable woodfuel. The legal and sustainable, and legal proportions should be recorded in order to calculate the output claim or usage. A BSL supplier **can** supply this material under the RHI. A supplier to a generator under the RO or CfD can supply this material with an 84% ratio TS legal and sustainable to legal mix claim.

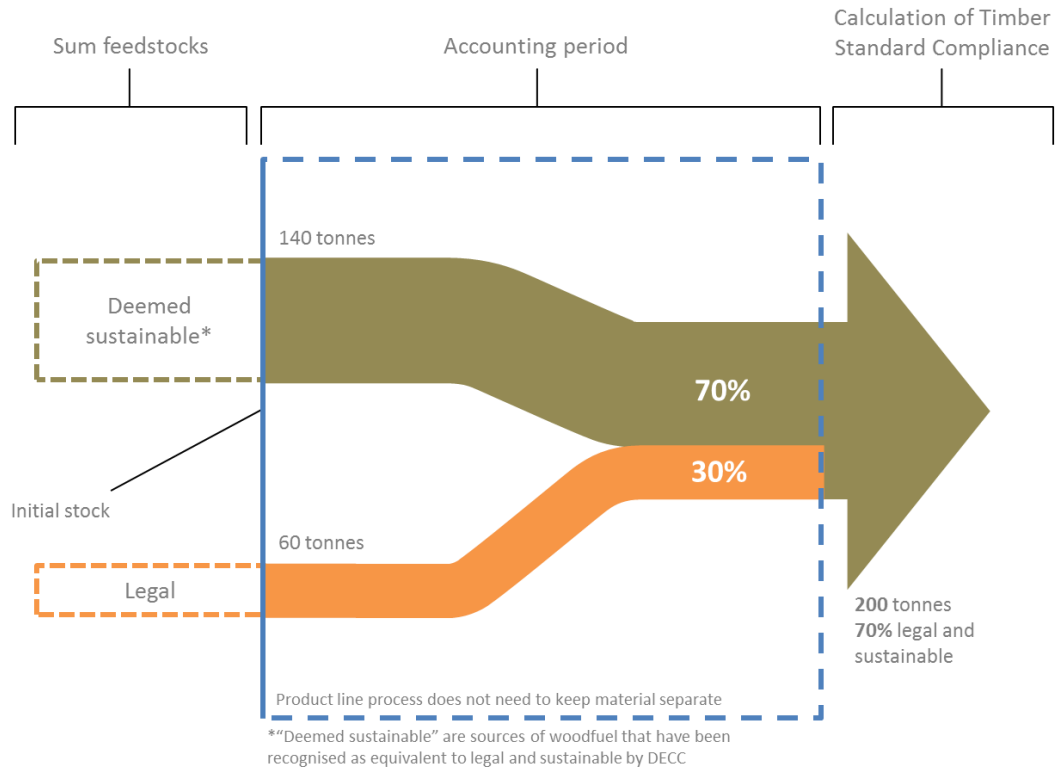


Example 5) Suppliers and generator are able to meet the minimum 70% threshold over the accounting period from different forms of legal and sustainable evidence. A BSL supplier **can** supply this material under the RHI. A supplier to a generator under the RO or CfD can supply



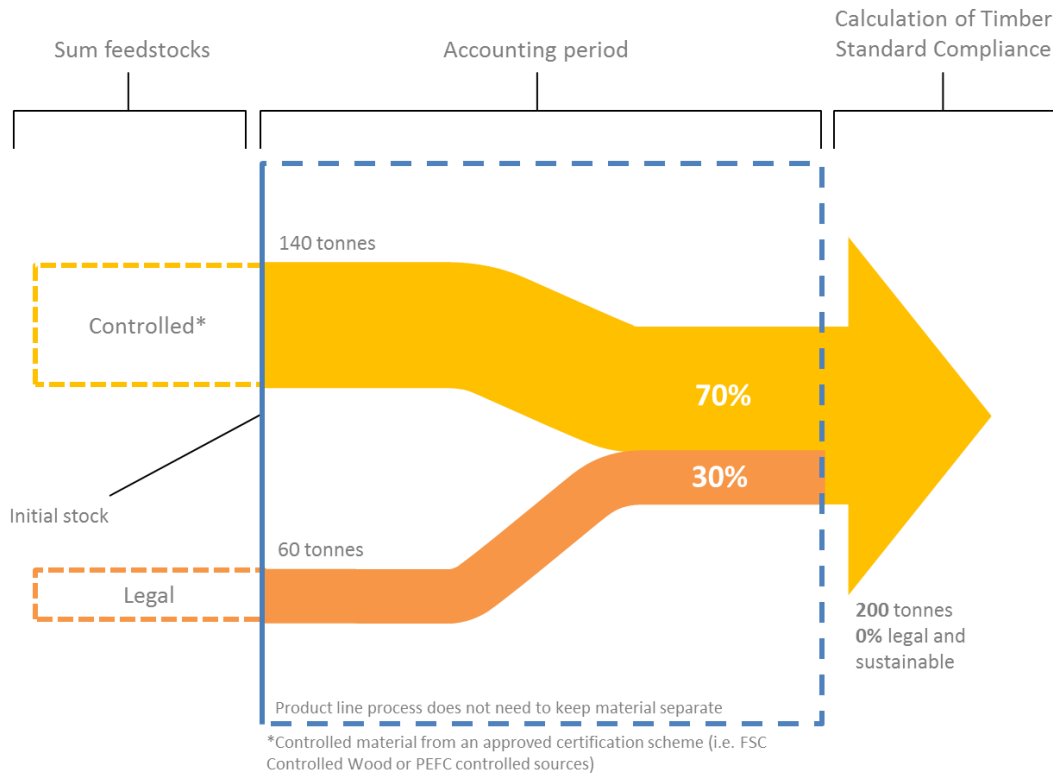
this material with a 70% ratio TS legal and sustainable to legal mix claim.

Example 6) Woodfuel from sources which are “deemed sustainable”³ can be included within the MBA to meet the 70%-30% legal and sustainable threshold over the accounting period. A BSL supplier **can** supply this material under the RHI. A supplier to a generator under the RO or CfD can supply this material with a 70% ratio TS legal and sustainable to legal mix claim.

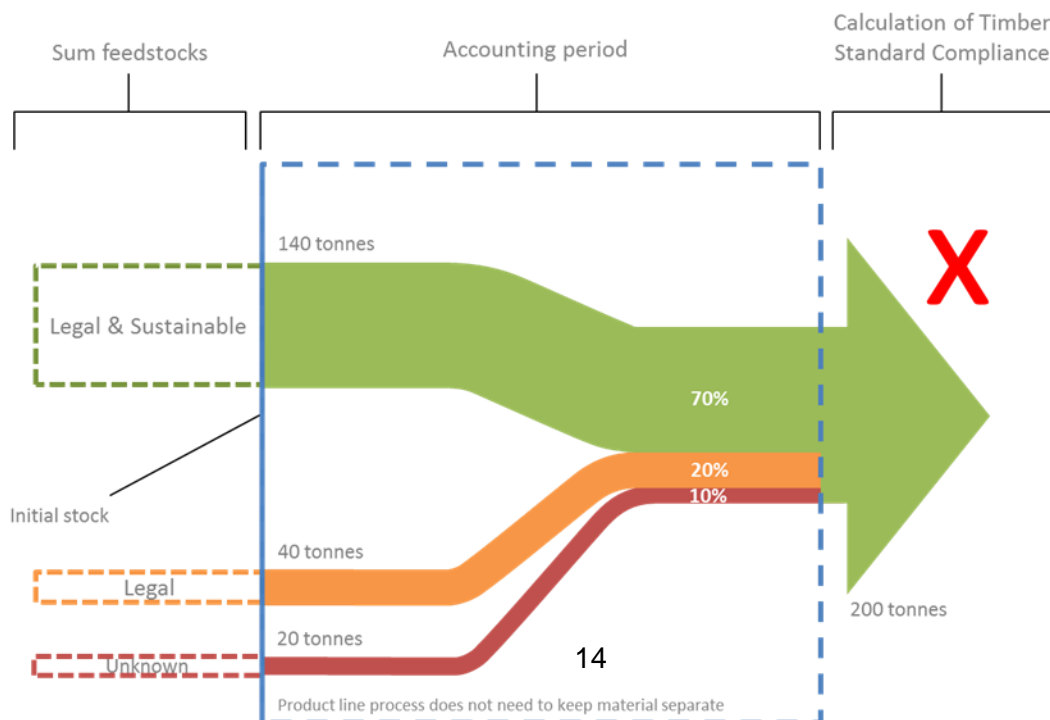


³ See the Woodfuel Advice note for further guidance on deemed sustainable sources of woodfuel

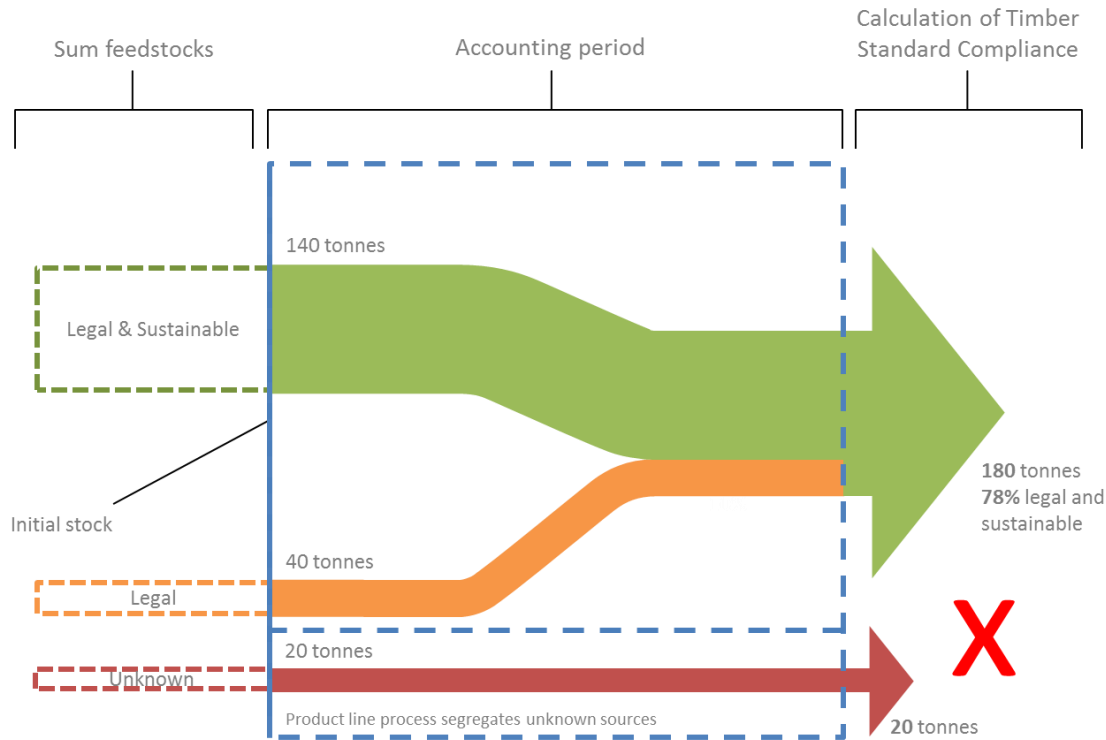
Example 7) Timber Standard Category A controlled material (for example FSC Controlled Wood or PEFC Controlled sources) is not legal and sustainable but may be considered TS legal. In the example below a BSL supplier **cannot** supply this material under the RHI. A supplier to a generator under the RO or CfD can supply this material with a 0% ratio TS legal and sustainable to legal mix claim.



Example 8a) A supplier cannot supply woodfuel containing a proportion with an unknown origin. Woodfuel of unknown origin does not meet EUTR legality requirements. Unknown sources being mixed with legal and sustainable and legal sources means that all the woodfuel cannot be considered Timber Standard compliant. A BSL supplier **cannot** supply this woodfuel under the RHI. A supplier to a generator under the RO or CfD **cannot** supply this woodfuel.



Example 8b) Segregation of Timber Standard compliant woodfuel with that of unknown origin enables the **supplier** to supply the Timber Standard compliant woodfuel to the **generator**. A BSL supplier **can** supply the woodfuel of known origin under the RHI. A supplier to a generator under the RO or CfD can supply the woodfuel of known origin with a 78% ratio TS legal and sustainable to legal mix claim. The woodfuel of unknown origin cannot be supplied under the TS.



Requirements of the mass balance approach

Claims made using the MBA need to be justified and shall be verified.

Ofgem or the BSL administrator will determine if the MBA and claims can be verified. The methodologies used by generators and suppliers to ensure the MBA and claims are justified will vary with the nature of each operation.

The CPET Practical Guide “Supply Chain practical guide for Category B evidence”, January 2007², provides guidance on what aspects would be expected to be included in a Chain of Custody control system. It is expected that a credible system would include the following aspects;

- documentation describing the process and roles of those involved
- records including purchasing and goods in as well as sales and goods out. Production records for production processes
- evidence of training and the competence of staff involved in managing and implementing the MB approach.

The Timber Standard Category A assessed certification schemes (FSC and PEFC) and other schemes specific to biomass, such as the Green Gold Label (GGL) and the Sustainable Biomass Partnership (SBP), have clear requirements for effective MBA control systems.

Where can I get more help?

Timber Standard for Heat & Electricity: This document sets out how the sustainable forest management criteria will apply to the use of woodfuel under the Renewable Heat Incentive and Renewables Obligation.

Woodfuel Advice Note: The Woodfuel Advice Note provides background information about the Timber Standard and guidance on how to implement it.

Checklist for Regional Supply Base Evaluation: The checklist for regional supply base evaluation helps woodfuel buyers and suppliers provide evidence for sustainability and legality requirements without the use of certification.

Central Point of Expertise on Timber (CPET) offer a helpline service providing advice to suppliers and generators of woodfuel on how they can comply with the sustainable forest management criteria for woodfuel set out in the Timber Standard.

Web: www.gov.uk/government/groups/central-point-of-expertise-on-timber

Email: cpet@efeca.com

Tel: +44 (0)1305 236 100 (Mon-Fri 9am – 5pm)

Ofgem can help provide enquiries regarding the RO scheme and RHI (Domestic and Non-Domestic) application processes.

Web: www.Ofgem.gov.uk

For Renewables Obligation (RO):

Email: renewable@Ofgem.gov.uk

Tel: 020 7901 7310

For Domestic RHI Applicants:

Email: DomesticRHI@Ofgem.gov.uk

Tel: 0300 003 0744 (Mon to Fri 8am to 7pm)

For Non-Domestic RHI Applicants:

Email: rhi.enquiry@Ofgem.gov.uk

Tel: 0845 200 2122 (Mon to Thurs 9am-5pm, and Fri 9am-4.30pm)

Please contact **DECC** if you have any enquiries regarding the RO and RHI policy or legislation process:

Web: www.gov.uk/decc

Email: correspondence@decc.gsi.gov.uk

Tel: 0300 060 4000

The **BSL Helpdesk** provides advice and support regarding the authorisation process to the Biomass Suppliers List.

Web: <http://biomass-suppliers-list.service.gov.uk/contact-us>

Email: bslhelpdesk@gemserv.com

Tel: +44 (0)20 7090 7769 (Mon-Fri 9am – 5pm)

Further information on the BSL can be found [here](#).

Glossary

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