



2BS Biomass Biofuels Sustainability voluntary scheme

**Requirements for the Verification of
Production and trading of biofuels, bioliquids and biogas and
Trading of biomass**

Doc : **2BS-STD-02**

Version : **2.0 (en)**

Approved on **27/08/2016**
EC Assessment v 5.2 (en)

2BS voluntary scheme

**REQUIREMENTS FOR
THE VERIFICATION OF PRODUCTION & TRADING
OF BIOFUELS, BIOLIQUIDS AND BIOGAS
and
TRADING OF BIOMASS**

Note on the status of this document

This reference document is an integral part of the 2BS voluntary scheme developed by the 2BS Association.

This update aims to comply with the current version of the EU Directive 2009/28/EC modified by the Directive 2015/1513 of the European Parliament and the Council of the 9th of September 2015.



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Introduction

The 2BSvs voluntary scheme has been developed to allow biomass producers, waste and residues originators, 1st gathering entities, collection sites, industrialists, traders and all other actors involved in the biofuels supply chain (globally named in this introduction: “economic operators”) to demonstrate the sustainability of their products in conformity with the European Union Directive 2009/28/EC modified by the Directive 2015/1513.

The scheme has been designed to cover all the requirements of the EU Directive 2009/28/EC modified by the Directive 2015/1513 and related EC Communication by:

- Covering all the sustainability criteria of the EU Directive 2009/28/EC modified by the Directive 2015/1513 (GHG emission savings, land with high biodiversity value, highly biodiverse grassland¹, and land with high carbon stocks and peat lands).
- Ensuring that “economic operators” provide accurate and reliable information regarding the origin of the biomass and/or biofuels in conformity with the sustainability criteria of the EU Directive 2009/28/EC modified by the Directive 2015/1513.
- Ensuring independent auditing of the systems used by “economic operators” to verify that they are accurate, reliable and protected against fraud.
- Ensuring that “economic operators” participating in the Scheme have an auditable system in conformity with points 2 & 5.2 of Module D1 of Annex II of the Decision on a Common Framework for the Marketing of Products, and have accepted the responsibility for preparing any information related to the auditing of such evidence.
- Ensuring that “economic operators” use an appropriate mass balance system in conformity with the EU Directive 2009/28/EC modified by the Directive 2015/1513 article 18.1.
- Ensuring that “economic operators” use an appropriate system for GHG calculation in conformity with the Directive 2009/28/EC modified by the Directive 2015/1513 article 19 and Annex V.

The requirements for mass balance systems have been developed as an integral part of the Scheme developed by the 2BS Association and are included in 2BS-STD-01 for biomass producers and 1st gathering points and in 2BS-STD-02 for the rest of the supply chain.

These requirements apply to legal entities within the biofuels supply chain that take legal ownership and physical possession of biomass and/or biofuels, and/or any other related products produced in compliance with the sustainability criteria of the EU Directive 2009/28/CE modified by the Directive 2015/1513 and point 5.2 of Module D1 of Annex II of the Decision on a Common Framework for the Marketing of Products.

¹ Article (1), of the Commission Regulation (EU) N0 1307/2014 of the 8th of December 2014



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Economic operators taking legal ownership and physical possession of the product throughout the biomass and biofuels supply chain shall be independently verified by an approved Verification Body with reference to the requirements set out in this document. These legal entities cannot make any claim regarding the sustainability of the product (biomass and/or biofuels) before an independent verification audit has been performed and a certificate has been awarded by an approved independent Verification Body.

Entities that take physical possession but do not take legal ownership of the product do not need to be independently verified by an approved Verification Body. However, these entities can be covered under the scope of verification of the relevant economic operator.

Legal entities that have not been independently verified cannot make claims regarding the sustainability characteristics of the product (biomass and/or biofuels).

The last economic operator in the supply chain shall ensure that it has access to relevant information covering the whole supply chain so that the sustainable origin of the biomass can be demonstrated.

Ligno-cellulosic material means material composed of lignin, cellulose and hemicellulose such as biomass sourced from forests, woody energy crops and forest-based industries' residues and wastes.

Non-food cellulosic material means feedstocks mainly composed of cellulose and hemicellulose, and having a lower lignin content than ligno-cellulosic material; it includes food and feed crop residues (such as straw, stover, husks and shells), grassy energy crops with a low starch content (such as ryegrass, switchgrass, miscanthus, giant cane and cover crops before and after main crops), industrial residues (including from food and feed crops after vegetal oils, sugars, starches and protein have been extracted), and material from bio-waste;

The expression “sustainability characteristics” is often used in this document. It encompasses the qualitative sustainable criteria – the origin and/or land use of biomass.

The expression “GHG characteristics” encompasses the quantitative sustainable criteria – the GHG emissions of the biomass and biofuels.

This document is an integral part of the 2BSvs voluntary scheme developed to evaluate the sustainability of biofuels and shall not be used to evaluate 1st gathering entities and their related biofuels producers without implementing all the relevant procedures and requirements of the 2BSvs voluntary scheme.

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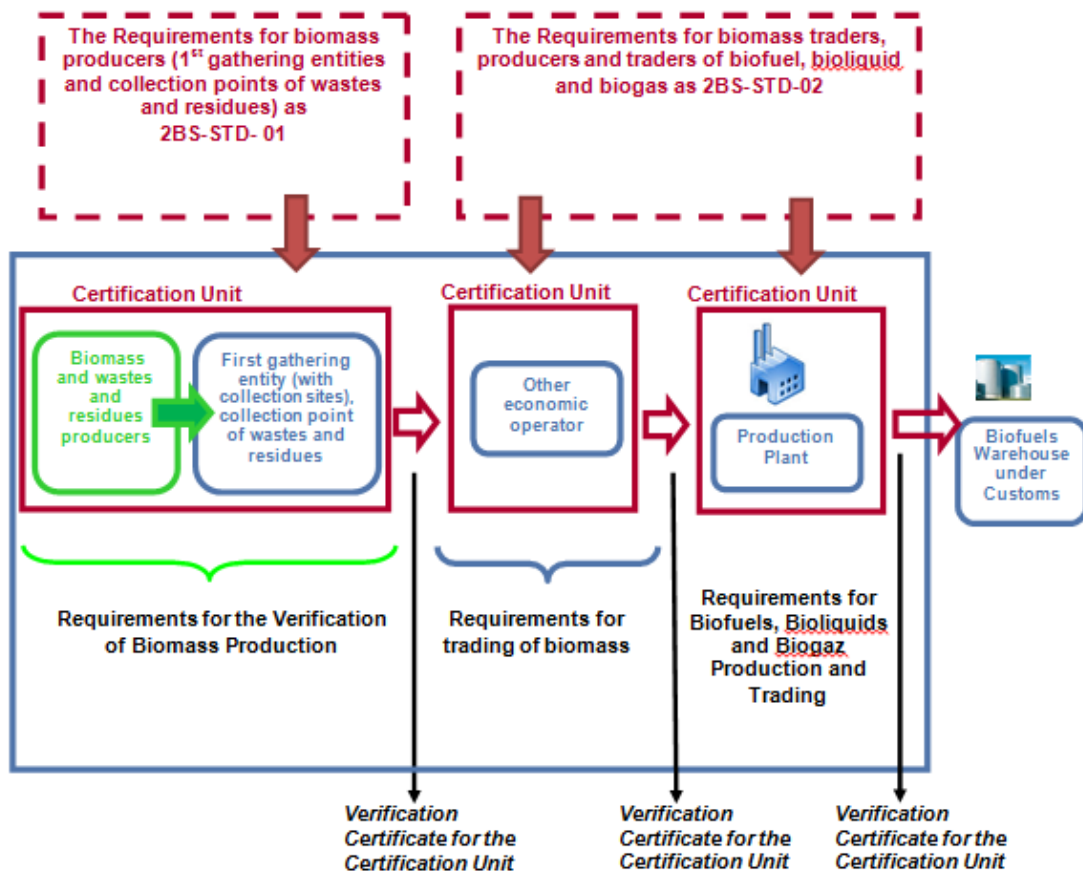
Transition rules

For economic operators with active 2BS certificates on 31 August 2016, all audits (initial certification, renewals and surveillances audits) conducted from 1st January 2018 must be done according to the new version of the scheme. Not implementing this requirement would result in the suspension of the 2BS certificate of the operator.

Operators who will be certified under 2BS for the first time from 1st January 2017 will be required to comply directly with this version of the requirements of this standard (2BS-STD 02, version....) and associated procedures.

Scope of the Requirements of 2BS-STD-02

These requirements are applicable to traders of agricultural biomass, waste and residues, (biofuels, bioliquids and biogas) and to production plants (biofuels, bioliquids and biogas).





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Principle 0: Internal management and monitoring system

*The economic operator **shall** have available and up-to-date records of all data and information required to demonstrate conformity with the EU Directive 2009/28/EC modified by the Directive 2015/1513.*

Criterion 0.1: The economic operator applying to be verified for compliance **shall** define the unit of verification.

Indicator 0.1.1 (Critical Indicator): The economic operator **shall** be registered as a legal entity in compliance with the relevant national requirements.

- **Verifier:** Legal registration document, or
- **Verifier:** Legal registration number, or
- **Verifier:** Legal registry of competent authority.

Indicator 0.1.2 (Major Indicator): The economic operator **shall** specify and document the unit of verification and procedures for the activities and sites covered by the system developed to demonstrate conformity with the EU Directive 2009/28/EC modified by the Directive 2015/1513.

- **Verifier:** List of activities, and
- **Verifier:** Procedures, and
- **Verifier:** Mapping of the processes and facilities, when available, and
- **Verifier:** List of all sites covered, including storage and subcontractors.

Indicator 0.1.3: The economic operator **shall** take legal ownership of the biomass and/or biofuels.

- **Verifier:** Contract, or
- **Verifier:** Delivery note, or
- **Verifier:** Invoice, or
- **Verifier:** Bill of lading.

Criterion 0.2: The economic operator **shall** have access to relevant and detailed information regarding the origin of the biomass and/or biofuels through the centralised database of valid certificates and relevant information presented on, or associated with, the sales documentation. The economic operator may perform a risk analysis and assessment.

Indicator 0.2.1: After conducting a risk analysis and assessment, the economic operator **shall** specify the data, documents and/or records needed for its suppliers of biomass and/or biofuels to demonstrate that the origin of the



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product is in conformity with the EU Directive 2009/28/EC modified by the Directive 2015/1513 and that it can be considered as sustainable. Such evidence shall be based on relevant official records, data or documents that can be independently verified.

- **Verifier:** List of data, documents and/or records, or
- **Verifier:** Valid certificate of independent verification under the Scheme, or
- **Verifier:** Valid certificate delivered under another voluntary scheme approved by the European Commission.

Indicator 0.2.2: The economic operator **shall** have access to a list of the voluntary verification schemes that have been approved by the European Commission to demonstrate conformity with the sustainability requirements of the EU Directive 2009/28/EC modified by the Directive 2015/1513, whenever purchasing material certified under any of these approved voluntary schemes.

- **Verifier:** List of approved voluntary certification schemes, and
- **Verifier:** Access to relevant websites, including website of the European Commission., and
- **Verifier:** Access to relevant information to check the validity of sustainability certificates.

Indicator 0.2.3 (Major Indicator): After conducting a risk analysis and assessment, the economic operator **shall** establish a list of all its suppliers of biomass claiming sustainability. This list shall be kept as part of the records of the entity and shall be reviewed and updated at least once a year.

- **Verifier:** Detailed list with for each supplier the name and address, and
- **Verifier:** Access to relevant websites to check the validity of certificates.

Indicator 0.2.4: The economic operator **shall** request from, and record for, each one of its suppliers documented evidence of conformity with the sustainability criteria such as a copy of a valid conformity certificate before buying and/or accepting biomass and/or biofuels claiming sustainability, including information on the country of origin and sustainability characteristics throughout the supply chain.

- **Verifier:** Copy of valid certificate, or
- **Verifier:** Contract with appropriate clause, or
- **Verifier:** Amendment to existing contract.

Indicator 0.2.5: The economic operator **shall** have documented procedures to check at least once a year that its suppliers of biomass and/or biofuels claiming sustainability are in conformity with the EU Directive 2009/28/EC modified by the Directive 2015/1513 through valid certificates, that they control and keep records on the country of origin of the biomass and/or biofuels, and that they



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have received valid certificates of conformity from their suppliers of biomass and/or biofuels.

- **Verifier:** Copy of valid certificates, or
- **Verifier:** Access to relevant websites to check the validity of certificates.

Criterion 0.3: The economic operator **shall** have relevant and detailed information regarding the origin, type and volume of biomass and/or biofuels supplied (*Note: This Criterion 0.3 needs to be audited within the context of the requirements defined in other Criteria under Principle 1 below*).

Indicator 0.3.1: The economic operator **shall** have implemented a procedure to record the information, data and documents required to receive and check the country of origin and classify biomass and/or biofuels as sustainable. This information should be monitored by the economic operator to ensure it is accurate and reliable through internal monitoring and verification activities.

- **Verifier:** List with information, data and documents required, and
- **Verifier:** Documented procedure and evidence that the procedure has been implemented, and
- **Verifier:** Relevant websites indicating valid certificates.
- **Verifier:** Documents such as invoices, bills of lading.

Indicator 0.3.2 (Major Indicator): The economic operator **shall** have records of relevant information for each batch, consignment and/or volume of biomass and/or biofuels received. This information should be monitored by the economic operator to ensure it is accurate and reliable through internal monitoring and verification activities.

- **Verifier:** Records including country of origin, sustainability and GHG characteristics, information on whether the biomass is a “waste and residue” or not, and
- **Verifier:** Copy of the relevant invoice and/or delivery document, and
- **Verifier:** Copy of the valid certificate.

Criterion 0.4: The economic operator **shall** develop and implement an internal monitoring system to ensure that all information regarding biomass is accurate, reliable and trustworthy.

Indicator 0.4.1: The economic operator **shall** appoint a manager responsible for the implementation of the monitoring system, including all internal monitoring activities.



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- **Verifier:** Terms of reference of the manager with specific responsibilities and powers with regard to the sustainability characteristics of the biomass, and
- **Verifier:** Designated manager to be interviewed by the independent auditor.

Indicator 0.4.2: The economic operator **shall** identify and establish a list of the activities, sites, information, data and documented procedures that need to be checked during monitoring activities. The system of the economic operator should include written policies, forms and instructions that contain an adequate description of the quality objectives, the organisational structure, the quality control and quality assurance techniques, the monitoring frequency, the quality records such as inspection reports and the means of achieving the monitoring of the required product sustainability criteria.

- **Verifier:** List of activities and sites, and
- **Verifier:** List of information, data and documented procedures to be checked during the document review, visits and/or monitoring audits.

Indicator 0.4.3: When subcontracting production or storage activities to independent third parties, the economic operator **shall** perform audits of these activities at least once a year, and keep records of these audits, to ensure that the integrity of the mass balance system is maintained. Information on the biofuel installation date of operation needs to be recorded in the mass balance system. All data, information and records related to potentially sustainable biomass should be checked during these activities and a report on the findings should be produced and recorded.

- **Verifier:** Audit plan and/or schedule, or
- **Verifier:** Records of audits with findings and/or recommendations.

Indicator 0.4.4: The designated manager of the economic operator **shall** perform annual reviews of its internal monitoring system to address potential non-conformities and ensure continuous improvement. Relevant procedures and records shall be checked by the manager and a report written to record the annual review. Such an annual review report may be sent to top management for review, action and/or approval.

- **Verifier:** Report of internal reviews, or
- **Verifier:** Internal review plan.

Criterion 0.5: The economic operator **shall** ensure that all relevant personnel have received adequate information and/or training which is necessary to implement the mass balance system and ensure the sustainability characteristics of the biomass are



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maintained. The economic operator can choose its own preferred method to inform and train people but records of information and/or training shall be kept.

Indicator 0.5.1: The economic operator **shall** develop appropriate information and/or training material for all relevant staff members, including subcontractors, if any, included in the certification unit. Such material should be available for review by the independent auditor.

- **Verifier:** Information and/or training material.

Indicator 0.5.2: The economic operator **shall** develop and implement a plan covering training and/or information sessions for all relevant staff members, including subcontractors, if any, included in the certification unit.

- **Verifier:** Plan covering training and/or information sessions, or
- **Verifier:** Interviews with staff members and suppliers, or
- **Verifier:** Evidence of implementation, or
- **Verifier:** List of information and/or training sessions with dates and locations, or
- **Verifier:** List of participants for each information and/or training session.

Criterion 0.6: The economic operator **shall** have and maintain up-to-date and appropriate registries and records covering all applicable requirements.

Indicator 0.6.1: The economic operator **shall** identify and make a list of all documents, information and data that are relevant to demonstrate conformity with the requirements of the EU Directive 2009/28/EC modified by the Directive 2015/1513. The system should contain written policies, procedures and instructions.

- **Verifier:** List of all relevant documents, with information and data, including country of origin, sustainability status throughout the supply chain with an indication of the voluntary schemes used to demonstrate conformity with the European Directive.

Indicator 0.6.2: The economic operator **shall** keep records of all documents, information and data that have been identified and listed as relevant to demonstrate conformity with the requirements of the EU Directive 2009/28/EC modified by the Directive 2015/1513.

- **Verifier:** Procedure related to record-keeping, maintenance and/or document control, and
- **Verifier:** Records.

Indicator 0.6.3: The economic operator **shall** keep all records for the period of validity of the verification certificate; i.e. five (5) years.



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- **Verifier:** Procedure related to record-keeping, maintenance and/or document control, and
- **Verifier:** Records.

Criterion 0.7: Biomass and/or biofuels from unknown or unclear origin **shall not** be considered as sustainable.

Indicator 0.7.1: The economic operator **shall** have a procedure to verify that a supplier is in conformity with the requirements of the EU Directive 2009/28/EC modified by the Directive 2015/1513 through a valid certificate of conformity before classifying as sustainable the biomass and/or biofuels originating from this supplier.

- **Verifier:** Procedure and
- **Verifier:** Registry of valid certificates of conformity or access to the central scheme's certificate database.

Indicator 0.7.2 (Major Indicator): The economic operator **shall** have developed and implemented a procedure to ensure that in case of doubt regarding the origin of the biomass and/or biofuels, the principle of caution is applied and the biomass is not registered as sustainable.

- **Verifier:** Written procedure, and
- **Verifier:** Evidence that the procedure has been communicated to all relevant staff, and
- **Verifier:** Interview with relevant staff to ensure awareness and systematic implementation of the procedure.



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Principle 1 : Mass Balance System for biofuels production

*The economic operator **shall** implement a mass balance system in conformity with the EU Directive Article 18, sections 1.a, 1.b and 1.c².*

Criterion 1.1: The economic operator **shall** have developed and documented a control system for the biomass and/or biofuels received based on a mass balance system at the level of containers, processing logistical facilities or sites (defined as a geographical location with precise boundaries within which products can be mixed) to ensure that “sustainability characteristics” remain assigned to “consignments”, in conformity with the EU Directive 2009/28/EC modified by the Directive 2015/1513.

Indicator 1.1.1 (Critical Indicator): The economic operator **shall** have developed and documented a mass balance system for the potentially sustainable biomass and/or biofuels it receives. Such a mass balance can be consolidated centrally as long as all relevant information (i.e. the type of feedstock including wastes’ and residues’ names as recognised by 2BS, categories for animal fat or the type of biofuel for biofuel as recognised by 2BS), volume, the country of origin, sustainability characteristics and all necessary GHG characteristics:

- Default value where a default value is used (in this case no value must be stated, only “Default value”,
- Actual values with proper units → KgCO₂/dry-Ton intermediate for all intermediate products and grCO₂/MJ for final biofuel,
- If necessary conversion factor and humidity rate,
- If necessary all information for the calculation of transport emissions: type of transport used (truck, boat,..), distance,...

are available for each processing or logistical facility, or site. Information on the biofuel installation’s date of operation needs to be recorded in the mass balance system.

- **Verifier:** Set of documented procedures for the mass balance system, or
- **Verifier:** Set of work instructions
- **Verifier:** Exhaustiveness of required information reported in the Mass balance.

Indicator 1.1.2: The economic operator **shall** have identified, characterised and classified the different types of biomass and/or biofuels it receives into different categories referring to the type of feedstock (as described in indicator 1.1.1).

- **Verifier:** List with categories of biomass defined by the type of feedstock, the country of origin, the sustainability characteristics and all necessary GHG characteristics...

² If more than one legal entity operates on a site then each legal entity is required to operate its own mass balance.



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Indicator 1.1.3: The economic operator **shall** record all information, data and/or documents received that were used to classify the biomass and/or biofuels as sustainable. All records shall be kept for a period of five (5) years. These records shall include at the very least the delivery documents and evidence of the monitoring process.

- **Verifier:** Records shall be kept for a period of five (5) years.

Indicator 1.1.4: The economic operator **shall** ensure that all relevant personnel have received adequate information and/or training which is necessary to implement the procedures.

- **Verifier:** Training and/or information records.

Criterion 1.2: The economic operator **shall** develop a mass balance system that ensures that the sustainability characteristics and the origin of biomass and/or biofuels can be demonstrated. In this mass balance system, the sustainability characteristics of the feedstock that is processed shall be attributed to products, co-products and residues of that process equally. For instance, when 50% of a mixture has been certified as being sustainable, 50% of all products, co-products and residues from that mixture should also be considered sustainable. The only exception is the allocation of GHG emissions, which should follow the rules of the EU Directive 2009/28/EC modified by the Directive 2015/1513.

Indicator 1.2.1 (Major Indicator): The economic operator **shall** develop documented mass balance procedures for biomass and/or biofuels, from the purchase or delivery of the biomass and/or biofuels, to the transfer of ownership. These procedures shall cover each processing or logistical facility, or site where potentially sustainable biomass and/or biofuels is received. Mass balance procedures should be based on records of the type of feedstock (as described in indicator 1.1.1) including wastes' and residues' names, categories for animal fat or the type of biofuel or bioliquid, the volume, the country of origin, the sustainability characteristics and all necessary GHG characteristics, the conversion factors if any processing takes place, the records of movements between logistical sites if any and the records of outputs.

- **Verifier:** Mass balance / Credit account procedures.

Indicator 1.2.2: The economic operator **shall** ensure that all relevant documentation, data and/or information related to the reception of the biomass and/or biofuels is accurate, reliable and trustworthy, and in conformity with the requirements defined in this document. The relevant information should be available in the system and spot checks should be performed and recorded. The economic operator shall also ensure that relevant information regarding conformity with the sustainability criteria is available to cover the entire biofuels chain.



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- **Verifier:** Mass balance / Credit account procedure specifying that the following information needs to be checked at reception; type, volume, country of origin of the feedstock, sustainability and all necessary GHG characteristics, and,
- **Verifier:** Work instruction, or
- **Verifier:** Records, or
- **Verifier:** Interviews with staff members.

Indicator 1.2.3 (Major Indicator): The economic operator **shall** record in a Mass balance / Credit account the origin of the feedstock (including from the NUTS 2 region within the member states of the EU or equivalent areas outside of the EU³ whenever relevant), as described in indicator 1.1.1, type of raw material, biomass feedstock, intermediate products used in the production of biofuels and/or the biofuels, volume, sustainability, GHG characteristics, for all the potentially sustainable biomass and/or biofuels received. This activity should only be performed by the most competent staff person(s), to maintain a high level of control and avoid incorrect sustainability claims, at the level of each logistical site or centrally.

- **Verifier:** Records.

Indicator 1.2.4 (Critical Indicator): The economic operator **shall** ensure that only the biomass and/or biofuels for which conformity with the sustainability requirements can be demonstrated is registered as sustainable in the Mass balance / Credit account. All information described in indicator 1.1.1 needs to be checked during internal monitoring and verification activities and by the independent auditor:

- **Verifier:** Valid certificate, and
- **Verifier:** Invoice or other similar document, and
- **Verifier:** Mass balance / Credit account, and
- **Verifier:** Interview with staff members.

Indicator 1.2.5: The economic operator **shall** establish a Mass balance / Credit account that is based on the origin of the feedstock (including from the NUTS 2 region within the member states of the EU or equivalent areas outside of the EU whenever relevant), and all other characteristics described in indicator 1.1.1. Specific characteristics must also be taken into account such as for wastes, residues, non-food cellulosic material and/or ligno-cellulosic material (according to annex IX of the EU directive 2009/28/EC modified by the European Directive 2015/1513 but not exclusively, consistent with the definition of waste in article 3(1) of directive 2008/98/EC providing that substances have not been intentionally modified or contaminated to meet that definition and with the definition of processing residue in article 2 point (t) of the EU directive 2009/28/EC modified by the European Directive 2015/1513), must be carefully taken into account.

³ See article 19, points 2 and 3 of European Directive 2015/1513 modifying EU Directive 2009/28/EC



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- **Verifier:** Mass balance / Credit account, and
- **Verifier:** Procedure for the Mass balance / Credit account, and
- **Verifier:** Records.

Indicator 1.2.6 Whenever biofuels have been produced from wastes, residues, non-food cellulosic material and/or ligno-cellulosic material, according to annex IX of the EU directive 2009/28/EC modified by the European Directive 2015/1513 but not exclusively, consistent with the definition of waste in article 3(1) of directive 2008/98/EC providing that substances have not been intentionally modified or contaminated to meet that definition and with the definition of processing residue in article 2 point (t) of the EU directive 2009/28/EC modified by the European Directive 2015/1513, the economic operator must record the type of biomass used in the production of the biofuel. For biofuels produced from wastes and residues, other than agricultural, aquaculture, fisheries and forestry residues, only the sustainability criterion relating to GHG savings **shall** apply.

- **Verifier:** Mass balance / Credit account, and
- **Verifier:** Procedure for the Mass balance / Credit account, and
- **Verifier:** Records.

Indicator 1.2.7: The economic operator **shall** define for the production process and/or each activity and the different raw materials, an adequate average conversion factor.

- **Verifier:** Calculated conversion factor, and
- **Verifier:** Evidence of the relevant data and calculation to determine the conversion factor(s).

Indicator 1.2.8: The economic operator **shall** ensure that the appropriate conversion factor(s) is used to maintain the Mass balance / Credit account. Different conversion factors should be calculated and used for different parts of the production process. These conversion factors should be checked for relevance by the independent auditor

- **Verifier:** Calculated conversion factor, and
- **Verifier:** Mass balance / Credit account, and
- **Verifier:** Records.

Indicator 1.2.9 (Critical Indicator): The economic operator **shall** ensure that no credit is claimed before an independent verification audit has been performed and a certificate has been awarded by an approved independent Verification Body. Furthermore, the economic operator **must** ensure that no credit is recorded before an equivalent quantity of sustainable biomass and/or biofuels shall have been purchased, received and/or registered in the Mass balance / Credit account. To do this the economic operator shall establish as a minimum a quarterly monitoring system to ensure that the balance of the credit account



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remains positive (it is possible to have a monthly monitoring system if it is more efficient for the company's organisation). Where the balance is continuous in time a 'deficit', i.e. that at any point in time more sustainable material has been withdrawn than has been added, must not occur. Additionally, the balance must not be in 'deficit' at the closing date.

- **Verifier:** Mass balance / Credit account, and
- **Verifier:** End of period balance, and
- Verifier:** Interview with staff members

Indicator 1.2.10 (Major Indicator): The economic operator **shall always** use the same starting and ending date for the period. For example:

- If the period is a monthly period and the starting date is the fifteenth of the month, it will always be the fifteenth of the month
- If the period is a quarterly period and the starting date is the beginning of the quarter, it will be always the beginning of the quarter.
- **Verifier:** Mass balance / Credit account, and
- **Verifier:** Beginning and end period of the balance.

Indicator 1.2.11: The economic operator **shall** maintain its Mass balance / Credit account up-to-date for all the biomass and/or biofuels under its ownership, even if it remains under the physical control of a subcontractor; i.e. storage, production. This should be periodically checked as part of the monitoring and verification activities implemented by the economic operator. If, within the period, more sustainable product has been received than dispatched, this difference generates a positive credit. The transfer of this "positive" credit from one period to another is only possible if the credit transfer is covered by the equivalent quantity of physical biomass (i.e. it is not possible to carry over more positive credits into the next period than the quantity which is physically in stock at the end of the period). Records should be kept and made available to the independent auditor.

- **Verifier:** Mass balance / Credit account, or
- **Verifier:** End of period balance, or
- **Verifier:** Records of physical quantities versus credits.

Indicator 1.2.12: The economic operator **shall** ensure that wastes, residues, non-food cellulosic material and/or ligno-cellulosic material, according to annex IX of the EU directive 2009/28/EC modified by the European Directive 2015/1513 but not exclusively, consistent with the definition of waste in article 3(1) of directive 2008/98/EC providing that substances have not been intentionally modified or contaminated to meet that definition and with the definition of processing residue in article 2 point (t) of the EU directive 2009/28/EC modified by the European Directive 2015/1513, have been clearly recorded in the mass balance / credit account.

- **Verifier:** Mass balance / Credit account, and
- **Verifier:** Records.



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Indicator 1.2.13: The economic operator **shall** ensure that the transfer of credit across national borders, or trading of virtual credit between different legal entities **is not authorized** in its procedures for the credit account and does not take place.

- **Verifier:** Mass balance / Credit account, or
- **Verifier:** Records.

Indicator 1.2.14: The economic operator **shall** develop and implement a documented procedure to ensure that the correct quantity is deducted from the Mass balance / Credit account when biomass and/or biofuel is sold as sustainable and a sustainability claim is made. Where the balance is continuous in time, a ‘deficit’, i.e. that at any point in time more sustainable material has been withdrawn than has been added, must not occur. Additionally, the balance must not be in ‘deficit’ at the closing date. This activity should only be performed by the most competent staff person(s), to maintain a high level of control and avoid incorrect sustainability claims, at the level of each logistical site or centrally.

- **Verifier:** Procedure, and
- **Verifier:** Mass balance / Credit account, and
- **Verifier:** Records, and
- **Verifier:** Interview with staff members.

Indicator 1.2.15: The economic operator **shall** ensure that the Mass balance / Credit account is up-to-date, accessible to all staff members that need it, but also secured against fraud by staff members as well as third parties.

- **Verifier:** Procedure implemented to ensure that Mass balance / Credit account system is secured, and
- **Verifier:** Mass balance / Credit account, and
- **Verifier:** Records, and
- **Verifier:** Interview with staff members.

Indicator 1.2.16: The economic operator **shall** develop a coding system specifically for the products sold as sustainable in its accounting system in order to ensure that it can identify the quantities sold as sustainable on the sales documents.

- **Verifier:** Linked sales documents, product codes or product identification.

Criterion 1.3: The processing units certified under 2BS voluntary scheme **shall** declare before January 30 to an identified-trusted third party and bound by strict professional secrecy, the quantities of sustainable biofuel, per type, during the previous calendar year. Biofuels, which are covered by other voluntary schemes with a sustainability certification, are not taken into account.



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Indicator 1.3.1: The processing unit **shall** appoint a manager responsible for the implementation of the monitoring system in line with the data issued from the mass balance, per type of biofuel marketed during the precedent calendar year.

- **Verifier:** Documented procedure and,
- **Verifier:** Evidence that procedure has been implemented and,
- **Verifier:** List with information required and records and,
- **Verifier:** Email of the identified-trusted third party (defined by 2BS Association).

Indicator 1.3.2 (Major indicator): The processing unit **shall** record the information transmitted for each type of biofuel and quantity in metric tons. These records shall be available to independent auditors for review at any time.

- **Verifier:** 2BS voluntary scheme approved form, duly completed, and
- **Verifier:** Compliance with deadlines for transmission (30 of January), and
- **Verifier:** Coherency of the data transmitted to the identified-trusted third party with the mass balance information covering the period from the first of January to the 31 of December of the precedent calendar year.

Criterion 1.4: The economic operator **shall** ensure that sustainability claims are only made after a verification audit has been performed and a certificate has been awarded by an approved independent Verification Body. All sustainability claims regarding the biomass and/or biofuels sold shall be accurate, reliable and trustworthy in conformity with the EU Directive 2009/28/EC modified by the Directive 2015/1513.

The economic operator **shall** have developed and documented a mass balance system for the potentially sustainable biomass and/or biofuels it receives. Such a mass balance can be consolidated centrally as long as all relevant information (i.e. the type of feedstock including wastes' and residues' names as recognised by 2BS, categories for animal fat or the type of biofuel for biofuel as recognised by 2BS), volume, the country of origin, sustainability characteristics and all necessary GHG characteristics:

- Default value where a default value is used (in this case no value must be stated, only "Default value",
- Actual values with proper units → KgCO₂/dry-Ton intermediate for all intermediate products and grCO₂/MJ for final biofuel,
- If necessary conversion factor and humidity rate,
- If necessary all information for the calculation of transport emissions: nature of transport used (truck, boat, ..), distance,...



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Indicator 1.4.1 (Major Indicator): The economic operator **shall** ensure that the following information is included on its invoices, delivery notes or certificates attached to sales documents when biomass and/or biofuels are sold as sustainable in conformity with the European Directives: a specific reference to the verification scheme applied, the origin of the feedstock (country of origin if relevant), the supplier, the type (including the type of wastes' and residues' names as recognised by 2BS, categories for animal fat or the type of biofuel for biofuel as recognised by 2BS), the volume, the sustainability, the GHG characteristics:

- Default value where a default value is used (in this case no value must be stated, only “Default value” must be indicated) as it would be difficult to know at a later stage of the chain of custody whether these emissions represent actual values or are derived from (disaggregated) default values where a value is given,
- Actual values with proper units → grCO₂/dry-Ton intermediate for all intermediate products and grCO₂/MJ for final biofuel,
- If necessary, conversion factor and humidity rate,
- If necessary, all information for the calculation of transport emissions: nature of transport used (truck, boat, ..), distance,...
- **Verifier:** Sales documents, and
- **Verifier:** Records.

Indicator 1.4.2: The economic operator **shall** ensure and have records to demonstrate the country of origin of the initial feedstock for the biomass and/or biofuels and that the sustainability criteria have been fulfilled throughout the biofuels chain.

- **Verifier:** A certificate of conformity issued under an approved voluntary certification scheme by an independent verification body or other similar documented evidence.

Indicator 1.4.3: The economic operator **shall** only make accurate, reliable and trustworthy sustainability claim(s) on sales documents, promotional documents and other communication for biomass and/or biofuels advertised and/or sold as sustainable in conformity with the EU Directive 2009/28/EC modified by the Directive 2015/1513. Sustainability claims shall only be made after a verification audit has been performed and a certificate has been awarded by an approved independent Verification Body and if the economic operator can demonstrate that the sustainability criteria have been fulfilled throughout the biofuel chain.

- **Verifier:** Sales documents, or
- **Verifier:** Promotional documents, or
- **Verifier:** Other communication.



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Principle 2: Greenhouse gas emission savings

The economic operator ***shall*** ensure that the greenhouse gas emission savings from the use of potentially sustainable biofuels is in conformity with the EU Directive Article 17, sections 2.

In the case of installations:

- that were in operation on or before the 5th of October 2015, a greenhouse gas emission saving of at least 35 % up until the 31st of December 2017 and at least 50 % from the 1st of January 2018, shall be achieved for biofuels and bioliquids
- starting operations after the 5th of October 2015, biofuels and bioliquids shall achieve a greenhouse gas emission saving of at least 60 %.

Criterion 2.1: The economic operators **shall** apply the requirements of the EU Directive 2009/28/EC modified by the Directive 2015/1513 regarding greenhouse gas emission savings in order to ensure at least 35% GHG emission savings up until December 2017 and at least 50% from January 2018 for installations in operation on or before the 5th of October 2015. In the case of installations starting their operations after the 5th of October, biofuels and bioliquids shall achieve a GHG saving of at least 60%.

Indicator 2.1.1 (Major Indicator): Where a processing installation used in the biofuels production chain was in operation on or before the 5th of October 2015, a minimum of 35% GHG savings needs to be demonstrated up until December 2017 and at least 50% from January 2018 (The term “*installation*” includes any processing installation used in the production process). In the case of installations starting their operations after the 5th of October 2015, biofuels and bioliquids shall achieve a GHG saving of at least 60%.

- **Verifier:** Official production document prior to the 5th of October 2015, or.
- **Verifier:** Other evidence of operation prior to the 5th of October 2015, or
- **Verifier:** Other official document proving the readiness to produce prior to the 5th of October 2015.

Indicator 2.1.2: Whenever GHG values are used, the economic operator **shall** not calculate a mean value of GHG emissions for biomass and/or biofuels with different GHG characteristics.

- **Verifier:** Records.

Criterion 2.2: Whenever required to provide GHG emissions information, the economic operator **shall** use the appropriate value in conformity with the European Directive, following one of the procedures described in the indicators below. GHG emission data shall only be included on documentation if actual values have been



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calculated. Where default values are used it is only necessary to transmit that the default value is used, in order to simplify the administrative burden and to avoid mistakes. Therefore, it is the responsibility of downstream operators to include information concerning the (disaggregated) default GHG emission values for the final biofuels when reporting to the Member States.

Indicator 2.2.1: Whenever appropriate, the economic operator **shall** use the default value provided in part A or B of Annex V if the data is laid down for its pathway in part A or B of annex V, and if the annualised emissions from carbon stock changes caused by land-use change (also called “ e_1 ”) are equal to or less than zero. Please note that default values also exist for different raw materials, such as waste vegetable or processed animal oil. Furthermore, default values for some raw material may also depend on the process type (i.e. wheat ethanol and palm oil biodiesel).

- **Verifier:** Evidence that annualised emissions from carbon stock changes caused by land use change (also called “ e_1 ”) are equal to or less than zero⁴, and
Verifier: GHG data for the type of biofuel in conformity with the European Directive Annex V point A or B.
- **Verifier:** GHG type of value attached to the biomass, and
- **Verifier:** Biomass origin, and
- **Verifier:** Type of biomass used to produce the biofuel.

Indicator 2.2.2: Whenever appropriate, the economic operator **shall** use the NUTS 2 typical greenhouse gas emissions from cultivation of agricultural raw materials with emissions lower than or equal to the emissions reported under the heading ‘Disaggregated default values for cultivation’ in part D of Annex V of the EU Directive 2009/28/EC modified by the Directive 2015/1513. This is possible for NUTS2 areas included in the list validated under article 19, point 2 of the European Directive, in the case of Member States, and, in the case of territories outside the Union, in reports equivalent to those referred to in paragraph 2 (article 19, point 3). These values included in the NUTS 2 reports do **not** represent disaggregated default values. Therefore, they can at that time only be used as an input for the calculation of actual values, but cannot be used to report emissions from cultivation in the unit grCO₂eq/MJ of biofuel. Additionally these values must be published on “The Commission Website” in the following unit: KgCO₂eq/ dry-ton of feedstock to be considered as usable.

- **Verifier:** GHG type of value attached to the biomass, and
- **Verifier:** Biomass origin (NUTS2 area in the case of Member States, and, equivalent area in the case of territories outside the Union), and

⁴ The detailed guidelines for the calculation of land carbon stocks are described in the communications of the European Commission.



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- **Verifier:** Official documents sent and recognised by the commission.

Indicator 2.2.3: Whenever appropriate, the economic operator **shall** use a value calculated as the sum of the factors of the formula described in part C of Annex V, where any of the factors used may be the disaggregated default value provided in part D or E of Annex V. The calculation methodology used shall be the 2BS methodology⁵ on the calculation of greenhouse gas emissions approved or recognized by the European Commission (published on the European Commission transparency platform and in accordance to EC Decision 2010/335/EU of June 2010). No other methodology shall be used to calculate the real GHG emissions generated by the production of the biomass. Nevertheless, *“The calculation of alternative averages for areas and crops which are covered by the NUTS 2 reports should under normal conditions **not** be deemed appropriate as the appropriate averages have already been calculated by the national authorities”*. Where, outside of the EU, these kinds of values are not available at country level, a calculation is possible only at group farm level and not at individual farm level. In case actual value is used, instead of usable default value for transportation e_{td} , GHG calculation emissions shall be done from the “point of origin” which is for example:

- The farm for agricultural raw material,
- The restaurant for UCO,

and not only from the 1st gathering entity / collection point which is the place where the Crop / the wastes and residues are gathered.

- **Verifier:** For the calculated values used in the formula, the record of all the data used for the calculation and the sources, and
- **Verifier:** Record of all calculations made to obtain the results.

Indicator 2.2.4 (Major indicator): Whenever actual values are used, economic operators **shall** describe in detail and in writing all relevant information in order to justify all choices and it is necessary to split the total amount of emissions into all elements of the GHG emission calculation formula that are relevant. This applies also to the elements of the formula, which are not included in the default values such as e_l , e_{sca} , e_{ccr} , e_{ccs} and e_{ee} . Relevant information is: a detailed description of the industrial process, data used was collected on-site or comes from literature⁶, in the case of non-usual data an explanation must be provided, the description of the calculation tool used if it is a “specific” tool. This documentation must be available in advance of the audit.

- **Verifier:** documentation describing the process, and
- **Verifier:** documentation describing all internal data and data coming from literature, and

⁵ The 2BS methodology is described in Procedure : “Methodology on the calculation of greenhouse gas emissions from biofuels and bioliquids under the 2BS voluntary scheme” 2BSvs-PRO- 03,

⁶ Data provided by the EU commission has to be used if possible. See <http://ec.europa.eu/energy/en/topics/renewable-energy/biofuels/voluntary-schemes>



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- **Verifier:** explanation in case of non-usual data used, and
- **Verifier:** total amount of emissions into all elements of the GHG emission calculation formula that are relevant, and
- **Verifier:** description of the calculation tool used if it is a specific tool.

Indicator 2.2.5: Whenever appropriate, the economic operator shall consider wastes and residues to have zero life cycle GHG emissions up to the process of collections. Wastes and residues include products listed in annex IX of the EU directive 2009/28/EC modified by the European Directive 2015/1513, but not exclusively consistent with the definition of waste in article 3(1) of directive 2008/98/EC providing that substances have not been intentionally modified or contaminated to meet that definition and with the definition of processing residue in article 2 point (t) of the EU directive 2009/28/EC modified by the European Directive 2015/1513).

- **Verifier:** Mass balance / Credit, and
- **Verifier:** GHG records.

Criterion 2.3: The economic operator **shall** provide transparent and reliable information regarding the nature and the origin of the biofuels in addition to the GHG information associated to the biofuel.

Indicator 2.3.1: The economic operator **shall** keep a record of the country of origin of the feedstock and the nature of the biomass used for the production of the biofuel

- **Verifier:** Mass balance / Credit account.

Indicator 2.3.2: The economic operator **shall** provide the GHG information associated with the biofuels. If the land-use change emissions are equal to or less than zero, he may use the default value of the European Directive Annex V point A or B (Please note that to use a default value the biomass shall not have been produced from land with land use change since January 2008, such as the conversion of permanent grassland). When a default value cannot be used, the economic operator shall calculate the actual value according to Annex V point C, with the possibility of using disaggregated default values from Annex V point D and E (default values for the cultivation stage from part D, annex V, included) using the 2BSvs calculation methodology⁷ approved or recognised by the European Commission.

- **Verifier:** GHG information, and
- **Verifier:** Evidence that the GHG information corresponds to the appropriate default value of the Directive, or
- **Verifier:** Data used together with the calculation methodology.

⁷ The 2BSvs methodology is described in Procedure : “Methodology on the calculation of greenhouse gas emissions from biofuels and bioliquids under the 2BSvs scheme” 2BSvs-PRO- 03,



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Criterion 2.4: The last economic operator certified in the biofuels production chain (the last interface) shall ensure that GHG emission savings over the whole biofuels production and supply chain shall be at least 35% up until December 2017 and at least 50% from January 2018 for installations in operation on or before the 5th of October 2015. In the case of installations starting their operations after the 5th of October 2015, biofuels and bioliquids shall achieve a GHG saving of at least 60% and sustainability claims are only to be made for biofuels that meet the appropriate target.

Indicator 2.4.1 (Critical Indicator): The economic operator **shall** keep a record of GHG calculations or default values used throughout the whole biofuels supply chain to demonstrate at least that the minimum requirement for GHG savings has been reached.

- **Verifier:** GHG data/information for each one of the relevant links within the supply chain, and
- **Verifier:** GHG records for each one of the relevant links of the supply chain.
- **Verifier:** When calculated values are used, records of the methodology and data used shall be available for each one of the entities within the supply chain.
- **Verifier:** When default values are used, the economic operator shall have access to relevant records to justify the use of a specific default value.

Indicator 2.4.2: The economic operator **shall** ensure that sustainability claims are only made for biofuels that meet the minimum required GHG savings target throughout the whole biofuels supply chain.

- **Verifier:** GHG data/information for each one of the relevant links within the supply chain, and
 - **Verifier:** Records of all the claims made with clear reference to the minimum required GHG savings target.
-