Audit requirements for the Production and Trading Of

"Fuels", "Co-processed fuels",

Production of Energy from Biomass

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 Revised Renewable Energy Directive EU/2018/2001(RED III).[1]

[1] *Consolidated version of the Directive: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02018L2001-20240716*

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Traceability of the changes in this auditing standard[2]

Date	Section	Paragraph	Deleted text	Text added	Version
22/02/2024	Principle 2	Indicator 2.2.4		•Verifier: Document completed by the supplier concerning esca cap to applied	11
22/02/2024	Principle 2	Indicator 2.2.5		**Indicator 2.2.5:** For esca factor, a bonus of 45 g CO2eq/MJ manure shall be attributed for improved agricultural and manure management in the case animal manure is used as a substrate for the production of biogas and biomethane. •Verifier: Manure production and storage capacity •Verifier: Monthly quantity entered into the digester"	11
01/10/2024	Title, Introduction, Scope of requirement			Addition of elements specific to co-processing	11
01/10/2024	Principle 3			Addition of a new principle specific to co-processing	11

[2] *After validation from the EC*

Introduction

The 2BSvs voluntary scheme has been developed to allow biomass producers, 1st gathering entities (first interfaces), processors (intermediary processing units and last interfaces), refineries, traders and all other economic operators involved in the biomass, biofuels, biomass fuels, recycled carbon fuels, renewable fuels of non-biological origin and bioenergy producers (electricity, heat, cooling), to demonstrate the sustainability of their products in conformity with the Revised Renewable Energy Directive EU/2018/2001 (RED III).

These requirements apply to legal entities in charge of:

- processing intermediary and final fuels (biofuels, bioliquids, biomass fuels)
- coprocessing fuels
- Installations producing bioenergy (electricity, heat, and/or cold) from biomass,
- traders of biomass, intermediary and final fuels

An approved Certification body shall independently verify economic operators taking legal ownership and physical possession of the products concerning the requirements set out in this standard.

These legal entities/interfaces cannot claim their products[3]' sustainability before an independent verification audit has been performed, and an approved independent Certification body has awarded a certificate

The last economic operators in the fuel supply chain (the last interface) shall ensure that they have access to relevant information covering the upstream supply chain so that the sustainable origin and GHG emissions of the raw materials can be demonstrated.
"Last interfaces" are requested to supply a POS (Proof of Sustainability) to the market and the authorities of Member States, stating the % of savings of GHG emission of their products compared with the applicable fossil reference.

To facilitate the reading of this standard,

- "critical" and "major" requirements are identified as "critical" or "major" indicators.
- The table below provides an overview of the weight of critical & major indicators for each principle.

Principle	Subject	Critical indicators	Major indicators
Principle 0	Internal Management System (28 indicators)	1	4
Principle 1	Mass Balance Systems (32 indicators)	2	11
Principle 2	Greenhouse gas emission savings (9 indicators)	2	2

The certification body is mandated to implement conflict-of-interest procedures ensuring that an auditor can conduct audits (certification, surveillance, and renewal audits) for the same economic operator for a maximum of three consecutive years. Furthermore, auditors cannot simultaneously

[3] *(biomass biofuels, biomass fuels, recycled carbon fuels and renewable fuels of non-biological origin, heat and/or cooling & power)*

engage in consultancy and auditing activities for the same economic operator. If an auditor has provided consultancy services to an economic operator, a minimum gap of 3 years should be maintained before being assigned to audit the same economic operator on the topics covered by 2BS.

Beyond consultancy and audit, the conflict-of-interest procedure established by the certification body must encompass additional aspects. These include financial or business relationships, as well as personal relationships, between the auditor, CB staff (including back-office personnel and report reviewers), and the economic operator (auditee).

The procedure should outline the specific compliance records required to demonstrate the implementation of this process. Monitoring compliance with this conflict-of-interest procedure is an integral part of the 2BS integrity program.

This document is an integral part of the 2BS voluntary scheme developed to evaluate the sustainability of:

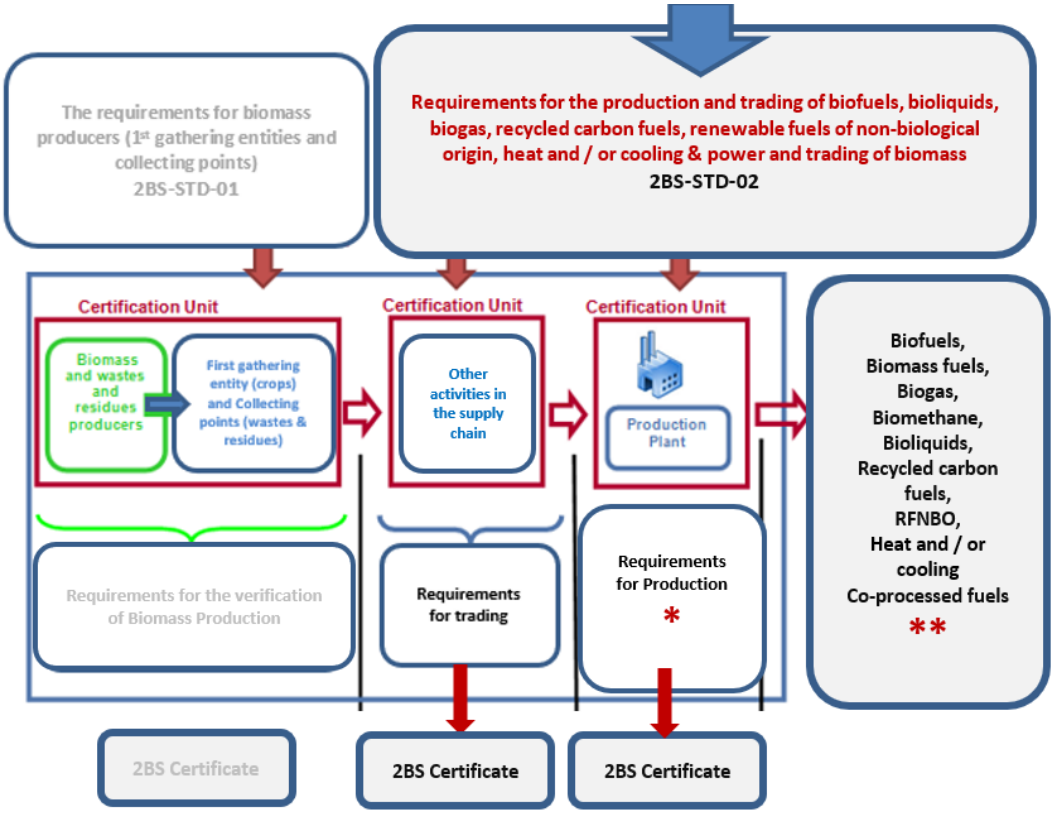
- production and trade of biofuels, bioliquids, biomass fuels, co-processed fuels
- trade of biomass (agricultural biomass and wastes & residues)

Further details and explanations can be found on

- 2BS-PRO-02 (Requirements for the certification process)
- 2BS-PRO-03 (Methodology for the calculation of GHG emissions)
- 2BS-PRO-04 (Extension of requirements to produce fuels from waste and residues)
- 2BS-PRO-05 (Extension of requirements to produce biogas and biomethane)
- 2BS-PRO-06 (Co-processing of raw materials and fuels from biomass, renewable and fossil sources)

Scope of the Requirements of 2BS-STD-02

These requirements apply to traders of agricultural and forestry biomass, waste and residues, biofuels, bioliquids, biogas, recycled carbon fuels and renewable fuels of non-biological origin and to production plants (biofuels, bioliquids, biogas, heat and/or cooling & power).



* **including coprocessing of sustainable bio and fossil feedstocks**

** **including aviation and marine fuel**

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 Revised Renewable Energy Directive EU/2018/2001 (RED III).

Criterion 0.1: The economic operator applying to be verified for compliance **shall** define the verification unit or the certifiable interface

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 Revised Renewable Energy Directive EU/2018/2001(RED III).

- **Verifier:** List of activities, and
- **Verifier:** Procedures, and
- **Verifier:** Mapping of the processes and facilities, and starting date of operations 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 raw materials and/or fuels.

- **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 raw materials and/or fuels 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(Major indicator): After conducting a risk analysis and assessment, the economic operator **shall** specify the data, documents and/or records needed for its suppliers of raw materials and/or fuels to demonstrate that the origin of the product is in conformity with the Revised Renewable Energy Directive EU/2018/2001 RED (III) 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, union database, or
- **Verifier:** Valid certificate of independent verification under 2BSvs, 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 Revised Renewable Energy Directive EU/2018/2001 (RED III) 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 the 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 claiming sustainability. This list shall be kept as the entity's records and updated as required.

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

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 (or if exempted from these criteria, the proof of waste or residue status), such as a copy of a valid conformity certificate before buying and/or accepting raw materials and fuels 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:** Pre-acceptance information document for waste in a waste management facility, or
- **Verifier:** Waste registers, or
- **Verifier:** Amendment to an existing contract.

Indicator 0.2.5: The economic operator **shall** have documented procedures to check at least once a year that its suppliers are claiming sustainability and conform with the Revised Renewable Energy Directive EU/2018/2001 (RED III) through valid certificates, or proofs of exemption, that they control and keep records on the country of origin of the raw materials.

- **Verifier:** Pre-acceptance information document for waste in a waste management facility, or
- **Verifier:** Copy of valid certificates, or
- **Verifier:** Access relevant websites to check certificates' validity and status.

Criterion 0.3: The economic operator **shall** have relevant and detailed information regarding the origin, type and volume of raw materials and/or fuels supplied by other economic operators.
(*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 raw materials and fuels as sustainable. The economic operator shall monitor this information to ensure it is accurate and reliable. Internal monitoring and verification activities should be in place.

- **Verifier:** List with information, data and documents required, and

- **Verifier:** Documented procedure and evidence that the process has been implemented, and
- **Verifier:** Relevant websites indicating the status and validity of certificates.
- **Verifier:** Documents such as invoices and 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 raw materials and fuels received. The economic operator should monitor this information to ensure it is accurate and reliable through internal monitoring and verification activities.

- **Verifier:** Records including country of origin, sustainability and GHG characteristics (if applicable), information on whether the raw material is or is derived from a "waste and residue" or not, and
- **Verifier:** For wastes and residues, an official list of materials classified as waste or residues in the country of origin and or list of materials defined in Annex IX of the Revised Renewable Energy Directive EU/2018/2001 (RED III) and Annex IV of the Commission Implementing Regulation (EU) 2022/996.
- **Verifier:** For wastes and residues, check that the content of the consignment has not been altered in any way from its point of origin.
- **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 raw materials and fuels is accurate, reliable, and trustworthy. The economic operator is required to keep all evidence necessary to comply with the Revised Renewable Energy Directive EU/2018/2001 (RED III) and the Implementing Regulation (EU) 2022/996 for a minimum of 5 years or longer where it is required by the relevant national authority.

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

- **Verifier:** Profile (sectorial knowledge) of the manager with explicit responsibilities and powers concerning the sustainability characteristics and GHG emissions of the biomass
- **Verifier:** Designated manager to be audited by an independent auditor concerning its duties

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. The date of the initial operation of the fuels, biogas and/or biomethane facility, heat and/or power facility needs to be recorded in the mass balance system. All data, information and records related to potentially sustainable raw materials and products should be checked during these activities, and a report on the findings should be produced and recorded.

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

Indicator 0.4.4: For heat and/or power generating installations, the type of fuels or biomass used, the thermal rated input, the efficiency and the location shall all be recorded in the mass balance system as described in Article 29 (11) of the Revised Renewable Energy Directive EU/2018/2001 (RED III).

- **Verifier:** List of fuel types and quantities used, including details of all biomass fuels or inputs and fossil fuels used.
- **Verifier:** Thermal rated input in MW.
- **Verifier:** Efficiency of the technology used[4] and whether CO_2 carbon capture and storage is applied.

Indicator 0.4.5: 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 will be written to record the annual review. Such a yearly review report may be sent to top management for review, action and/or approval.

- **Verifier:** Report of internal reviews, or
- **Verifier:** Action 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 provide the sustainability characteristics of the raw materials and fuels are 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

[4] *Electricity from installations with a total rated thermal rated input from 50 to 100 MW, shall be produced applying high-efficiency cogeneration technology, or, for electricity-only installations, meeting an energy efficiency level associated with the best available techniques (BAT-AEELs) as defined in Commission Implementing Decision (EU) 2017/1442 (1); for installations with a total rated thermal rated input above 100 MW, it is produced applying high-efficiency cogeneration technology, or, for electricity-only installations, achieving an net-electrical efficiency of at least 36 %.*

- **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** maintain up-to-date and appropriate registries and records covering all applicable information traceability 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 Revised Renewable Energy Directive EU/2018/2001 (RED III). The system should contain written policies, procedures and instructions.

- **Verifier:** List of all relevant documents, with information and data, including country of origin, and sustainability status throughout the supply chain, with an indication of the voluntary schemes used to demonstrate conformity with the Revised Renewable Energy Directive EU/2018/2001 (RED III).

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 Revised Renewable Energy Directive EU/2018/2001(RED III).

- **Verifier:** Procedure related to record-keeping, maintenance and/or document control, and
- **Verifier:** Applicable records to identify and characterise each supplier

Indicator 0.6.3: The economic operator **shall** keep all records for the verification certificate's validity period, i.e. five (5) years or longer where it is required by the relevant national authority.

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

Criterion 0.7: Raw materials and fuels from unknown or unclear origins **shall not** be considered sustainable.

Indicator 0.7.1: The economic operator **shall** have a procedure to verify that a supplier conforms to the requirements of the Revised Renewable Energy Directive EU/2018/2001 (RED III) through a valid certificate of conformity before classifying the raw materials and fuels originating from this supplier as sustainable.

- **Verifier:** Procedure and
- **Verifier:** Registry of valid certificates of conformity or access to the Website' of the approved voluntary scheme under which the certificate was delivered and published

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 raw

materials and fuels, the principle of precaution is applied and the raw material and/or fuel 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.

Principle 1: Mass Balance System for raw materials and fuels production

*The economic operator **shall** implement a mass balance system in conformity with Revised Renewable Energy Directive EU/2018/2001 (RED III) and as described in 2BS-PRO-02.*

Criterion 1.1: The economic operator **shall** have developed and documented a control system for the raw materials and/or fuels it receives or generates by itself based on a mass balance system at the level of a container, processing or logistical facility, transmission and distribution infrastructure or site (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 Revised Renewable Energy Directive EU/2018/2001(RED III) and which achieves balance over an appropriate time.

Indicator 1.1.1 (Critical Indicator): The economic operator **shall** have developed and documented a mass balance system for the potentially sustainable raw materials and/or fuels 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, categories for animal fat or the type of fuel, volume, the country of origin, sustainability characteristics and all necessary GHG characteristics as follows:

- Default value where a default value is used (in this case, no value must be stated, only "Default value",
- Actual values with proper units à $KgCO_2$/dry-Ton intermediate for all intermediate products and gCO_2/MJ for final biofuel,
- If necessary, conversion factor and humidity,
- If necessary, all information for calculating transport GHG emissions: type of transport used (truck, boat,..), distance,…

The information above shall be available for each container, processing or logistical facility, transmission and distribution infrastructure or site. Information on the fuel installation's starting date of operation needs to be recorded in the mass balance system.

- **Verifier:** Documented procedures for mass balance system, or
- **Verifier:** Work instructions

Indicator 1.1.2: The economic operator **shall** have identified, characterised and classified the raw materials and/or fuels it receives or generates by itself into different categories referring to the type of feedstock (as described in indicator 1.1.1).

- **Verifier:** List with categories of raw materials and/or fuels defined by the type of feedstock, the country of origin, the sustainability characteristics, type of GHG emissions and GHG emissions data

Indicator 1.1.3: The economic operator **shall** record all information, data and/or documents received that were used to classify the raw materials and/or fuels as sustainable. All records shall be kept for a period of five (5) years or longer where it is required by the relevant national authority. 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 or longer where it is required by the relevant national authority.

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

- **Verifier:** Information and/or training material
- **Verifier:** Interviews with staff members
- **Verifier:** Attendance list

Indicator 1.1.5: Renewable gases such as biomethane can be mixed in the transmission and distribution infrastructure (gas grid), provided the infrastructure is interconnected. The quantities injected into the gas grid and/or those withdrawn outputs must be documented.

- **Verifier:** Set documented procedures for measuring and recording injected and/or withdrawn quantities of renewable gases.

Criterion 1.2: The economic operator trading or producing biofuels, bioliquids, biomass fuels (solids and gaseous), recycled carbon fuels, renewable fuels of non-biological origin or trading biomass **shall** develop a mass balance system that complies with Article 30 (1) and Article 30 (2) of the Revised Renewable Energy Directive EU/2018/2001 (RED III) and ensures that the sustainability characteristics and the origin of raw materials and/or fuels can be demonstrated for each consignment. Economic operators will implement any specific requirements that have been defined by the relevant Member State where the fuel or biomass is used for heat and /or power. Any financial or other support that has been provided for the consignment by the Member States will be documented as part of the sustainability characteristics when applicable

After processing of raw materials, information on the sustainability characteristics of the consignment shall be adjusted and assigned to the product that is biofuels, bioliquids, biomass fuels, renewable fuels of non-biological origin, or recycled carbon fuels, by applying a conversion factor representing the ratio between the mass of the product and the mass of the raw material entering the process.

Where there is more than one product, a different conversion factor shall be applied for each product, and a distinct mass balance shall be set up.

The only exception is the allocation of GHG emissions, which should follow the rules of 2BS-PRO-03.

The economic operator producing heat or power from biomass, bioliquids, biogas or renewable fuels of non-biological origin **shall** use a 'mass balance' system based on ratios of sustainable inputs, as heat and/or cooling & power can only be quantified in units of energy (not mass).
For example, a power station using wood pellets as feedstock shall calculate the ratio by mass of sustainable to unsustainable wood pellets for each three months period. This same ratio shall be applied to the power output to calculate the production of sustainable electricity over the same three-month period.

Where the feedstocks vary, the operator must show that the power and/or heat outputs of sustainable and unsustainable feedstocks are the same by referring to experimental results or peer-reviewed publications. If they are not the same, then the size of consignments shall be adjusted according to their energy content.

If the operator produces more sustainable heat or power than is sold at the end of the three months, no credit can be transferred to the next period.

Indicator 1.2.1 (Major Indicator): The economic operator **shall** develop documented mass balance procedures for raw materials and/or fuels, from the purchase or delivery to the transfer of ownership. These procedures shall cover each container, processing or logistical facility, transmission and distribution infrastructure or site where potentially sustainable raw materials and/or fuels are received or generated by itself.
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 fuel, the volume, the country of origin, the sustainability characteristics and all necessary GHG emissions, the conversion factors if any processing takes place, the records of movements between logistical sites if any and the records of outputs.

- **Verifier:** Evidence of ownership transfer from the supplier up to the customer (date, type of product, tonnage, country of origin, GHG emissions, sustainability characteristics)
- **Verifier:** Credit account procedures, sustainability declaration, POS

Indicator 1.2.2: The economic operator **shall** ensure that all relevant documentation, data, and/or information related to the reception of the raw materials and/or fuels 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 pertinent information regarding conformity with the sustainability criteria of fuel or fuel precursor i.e. the economic operator shall also ensure that relevant information regarding conformity with the sustainability criteria and the support that has been provided for the production of fuel or fuel precursor including the type of support (RES[5] sector and country) is available to cover the entire supply chain.

- **Verifier:** Monitoring instructions
- **Verifier:** Monitoring records
- **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 EU whenever relevant), as

[5] *Article 30, section 1 RED III and Implementing Regulation (EU) 2022/996, Annex I, section 1 (j)*

described in indicator 1.1.1, type of raw material, biomass feedstock, intermediate products used in the production of fuels, volume, sustainability, GHG characteristics, for all the potentially sustainable raw materials and/or fuels 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:** Mass Balance/Credit account

Indicator 1.2.4 (Major Indicator): The economic operator **shall** ensure that only the raw materials and or fuels for which conformity with the sustainability requirements can be demonstrated are registered as sustainable in the Mass balance / Credit account and Union database. If a consignment of raw material or fuel has already been taken into account in the calculation of the share of renewable energy in any Member State, it cannot be registered as sustainable in the Mass balance/credit account.
The appropriate period of time for achieving the mass balance shall be up to 3 months for all traders and processing units.
As alternatives to the calendar year, economic operators may also use either the financial year for bookkeeping purposes or another starting point for the mass balance period, provided that the choice is clearly indicated and applied consistently.
At the end of the mass balance period, the sustainability data carried forward should be equivalent to the physical stock in the container, processing or logistical facility, transmission and distribution infrastructure or site.

All information described in indicators 1.1.1 and 1.2.2 needs to be checked during internal monitoring and verification activities and by the independent auditor:

- **Verifier:** Valid certificate, and
- **Verifier:** Invoice or other similar documents, and
- **Verifier:** Credit account (tonnage received, on stock and delivered during the MB period)
- **Verifier:** Interview with staff members.

Indicator 1.2.5 Whenever fuels have been produced from wastes, residues, non-food cellulosic material and/or lignocellulosic material, according to Revised Renewable Energy Directive EU/2018/2001 (RED III), 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, the economic operator must record the type of raw material used in the production of the fuel.

For fuels 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 1.2.6: To ensure transparency, mixing under the mass balance system is only possible if raw materials and fuels belong to the same product group[6].

Consignments of different types of raw materials and fuels with differing energy content can be mixed in the mass balance system, providing they have similar physical or chemical characteristics, heating values, and/or conversion factors.

[6] *Check the concept of "Product Group" described in procedure **2BS-PRO-02**, section **9.1.5***

Raw materials with different energy content can be mixed for the purposes of further processing[7], in which case, the size of consignments shall be adjusted according to their energy content.

However, the application of the mass balance system to different types of raw materials must not introduce a risk that the rules set out in Articles 26 and 27 of the Revised Renewable Energy Directive EU/2018/2001(RED III) that apply to determining the contribution of biofuels, bioliquids and biomass fuels towards the targets for renewable energy are not correctly used or circumvented.

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

Indicator 1.2.7 (Major Indicator): The economic operator trading or producing biofuels, bioliquids, biomass fuels (solids and gaseous), recycled carbon fuels, renewable fuels of the non-biological origin or trading biomass **shall** define the production process and/or each activity and each raw material a conversion factor which represents the ratio between the mass of the output product and the mass of the raw material entering the process. Where there is more than one output product, a different conversion factor shall be applied, and the economic operator shall deploy a distinct mass balance.

- **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 producing biofuels, bioliquids, biomass fuels (solids and gaseous), recycled carbon fuels, renewable fuels of non-biological origin or trading biomass **shall** ensure the appropriate conversion factor(s) is used to maintain the Mass balance / Credit account.

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

Indicator 1.2.9 (Major Indicator): The economic operator producing heat and/or electricity **shall** define for the production process and/or each activity a ratio between the mass of sustainable feedstock and the mass of unsustainable feedstock used in each three-month period.

The same ratio shall be applied to the total electricity and/or heat produced in the same three-month period to determine the quantity of sustainable electricity and or heat in MJ. Where the types of feedstocks vary, the operator must use energy or heat output values from experimental results or peer-reviewed publications to adjust the size of consignments according to their energy content.

- **Verifier:** Calculated ratios, and
- **Verifier:** Evidence of the relevant data and calculation to determine the ratio.
- **Verifier:** Types of feedstocks and energy or heat output values from the literature or experimental data for varying feedstocks.

[7] *"Further processing", means the physical mixing of raw material **at the fuel production plant** for the sole purpose of producing biofuels, bioliquids, or biomass fuels.*

Indicator 1.2.10 (Major Indicator): The economic operator trading or producing heat and/or power **shall** ensure that the appropriate ratio or heat/power output is used to maintain the three-month 'mass balance'.

- **Verifier:** Calculated ratio, or
- **Verifier:** mass or volume of incoming consignments adjusted for their energy/power/heat output
- **Verifier:** Records.

Indicator 1.2.11 (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 Certification body.
Furthermore, the economic operator **must** ensure that no credit is recorded before an equivalent quantity of sustainable raw materials and/or fuels shall have been purchased, received and/or registered in the Mass balance / Credit account.

To do this, the economic operator shall establish a minimum three-month period monitoring system to ensure that the balance of the credit account 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 three-month balance period, and
- **Verifier:** Interview with staff members

Indicator 1.2.12 (Major Indicator): for traders and last interfaces, the mass balance system must not show a deficit at the conclusion of a three-month mass balance accounting period. If an audit identifies a deficit at the end of this period, it will be considered a "major" non-compliance.

- **Verifier:** Mass balance / Credit account, an

Indicator 1.2.13: The economic operator trading or producing biofuels, bioliquids, biomass fuels (solids and gaseous), recycled carbon fuels, renewable fuels of the non-biological origin or trading feedstock **shall** maintain its mass balance/credit account up-to-date for all the raw materials and/or fuels 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, a 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 1.2.14 The economic operator producing heat and /or electricity **shall** maintain its mass balance up to date for all the raw materials under its ownership, even if it remains under the physical control of a subcontractor, i.e., storage and production. This should be periodically checked as part of the monitoring and verification activities implemented by the economic operator. If, within the period, the 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 1.2.15 (Major Indicator): The economic operator producing more sustainable heat and /or power than can be sold at the end of three months shall NOT be able to transfer credit to the next three-month period.

- **Verifier:** End-of-period ratios and balance
- **Verifier:** Start of next period balance

Indicator 1.2.16: The economic operator **shall** ensure that wastes, residues, non-food cellulosic material, and/or lignocellulosic material, according to annex IX of the Revised Renewable Energy Directive EU/2018/2001 (RED III) 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 description of processing residue of the Revised Renewable Energy Directive EU/2018/2001 (RED III), have been recorded in the mass balance/credit account.

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

Indicator 1.2.17: The economic operator **shall** ensure that the transfer of credit across national borders or trading of virtual credit between different legal entities **is not authorised** in its credit account procedures and does not occur.

- **Verifier:** Mass balance / Credit account, or
- **Verifier:** Bookkeeping

Indicator 1.2.18: 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 raw materials and/or fuels are sold as sustainable and a sustainability claim is made.
The transfer of sustainability characteristics must always be accompanied by a physical transfer of material.
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 operation mode (training of concerned staff), and
- **Verifier:** Mass balance / Credit account, and
- **Verifier:** Interview with staff members.

Indicator 1.2.19: The economic operator **shall** ensure that the Mass balance / Credit account is up-to-date, accessible to all staff members who need it, and secured against fraud by staff members.

- **Verifier:** List of authorized people to access to the mass balance tool
- **Verifier:** Control mechanism and definition of responsibilities
- **Verifier:** Implementation monitoring and possible corrective actions

Indicator 1.2.20: The economic operator **shall** develop a coding system specifically for the products sold as sustainable in its accounting system to ensure that it can identify the quantities sold as sustainable on the sales documents.

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

Criterion 1.3: The last interfaces certified under the 2BS voluntary scheme **shall** declare before January 30 to 2BS the quantities of direct production of sustainable fuels, per type. For each type of output, the raw materials (inputs) must be specified per country of origin, identification and tonnage of each feedstock. This declaration concerns the previous calendar year.
Fuels certified by other voluntary schemes shall not be accounted for by this criterion.

Indicator 1.3.1: The last interface **shall** appoint a manager responsible for implementing the monitoring system; the applicable data shall be issued from the mass balance per type of fuel marketed during the precedent calendar year

- **Verifier:** Documented procedure and,
- **Verifier:** Evidence that procedure has been implemented and,
- **Verifier:** List with the information required and records and,
- **Verifier:** Records available in the 2BS intranet of the certified entity

Indicator 1.3.2 (Major indicator): The last interface **shall** record the information transmitted for each fuel type and quantity in metric tons for liquids or other convenient units for gases. These records shall be available to independent auditors for review at any time.

- **Verifier:** 2BS intranet duly completed, and
- **Verifier:** Compliance with deadlines for transmission (January 30), and
- **Verifier:** Coherency of the data transmitted to 2BS with the mass balance information covering the period from January 1 to December 31 of the preceding 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 Certification body. All sustainability claims regarding the raw materials and/or fuels sold shall be

accurate, reliable and trustworthy in conformity with Revised Renewable Energy Directive EU/2018/2001 (RED III).
The economic operator **shall** have developed and documented a mass balance system for the potentially sustainable raw materials and/or fuels 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 à $KgCO_2$/dry-Ton intermediate for all intermediate products and gCO_2/MJ for final fuel,
- If necessary, conversion factor and humidity rate,
- If necessary, all information for calculating transport emissions: nature of transport used (truck, boat, ..), distance,…
- The transfer of sustainability characteristics must always be accompanied by a physical transfer of material.

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 raw materials and/or fuels are sold as sustainable in conformity with the Revised Renewable Energy Directive EU/2018/2001 (RED III) => a specific reference to the verification scheme applied, the origin of the feedstock (country of origin if relevant), the supplier, the type (including the variety 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:

- **Verifier:** Sales documents, and
- **Verifier:** Certificates, delivery notes, etc.

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

- **Verifier:** A certificate of conformity issued under an approved voluntary certification scheme by an independent certification 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 raw materials and/or fuels advertised and/or sold as sustainable in conformity with the Revised Renewable Energy Directive EU/2018/2001 (RED III). Sustainability claims shall only be made after a verification audit has been performed and an approved independent Certification body has awarded a certificate; the economic operator shall demonstrate that the sustainability criteria have been complied with throughout the upstream fuel chain.

- **Verifier:** Cross-checking, date of the sales/delivery documents and the validity date of the certificate

- **Verifier:** Promotional copies, or
- **Verifier:** Other communication.

Criterion 1.5: When economic operators are under the legal obligation to fill in transactions under the Union Database, the auditor **shall** ensure that these economic operators use the European Union database or relevant national database.

Indicator 1.5.1 (Major Indicator): The economic operator **shall** ensure that all relevant information[8] for each consignment, as required, is entered into the Union database (or relevant national database) within the timeframe required. Any deviations between data that has been registered in the Union Database and the respective data from the economic operator's documentation shall be immediately flagged in the audit report and to the voluntary scheme.

- **Verifier:** Work instructions, training, and responsibilities
- **Verifier:** UDB or relevant national database entries (initial stock registration, transaction data, etc.)

Principle 2: Greenhouse gas emission savings

*The economic operator **shall** ensure that the greenhouse gas emission savings from the use of potentially sustainable fuels and from the production of bioenergy from potentially sustainable biomass fuels or biomass are conform with Revised Renewable Energy Directive EU/2018/2001 (RED III) Article 29, 10 (biofuels, bioliquids, biogas consumed in the transport sector, biomass fuels) or Article 25, (2)* - renewable fuels of non-biological origin

Criterion 2.1: The economic operators **shall** apply the requirements of Revised Renewable Energy Directive EU/2018/2001 (RED III) regarding greenhouse gas emission savings to ensure the appropriate minimum GHG savings.

Indicator 2.1.1 (Major Indicator): An installation shall be considered to be in operation once the physical production of biofuels, biogas consumed in the transport sector and bioliquids, and the physical production of heating and cooling and electricity from biomass fuels has started.

- **Verifier:** Official production document stating the date that physical production started. To be checked against the specific GHG savings thresholds as stated in Revised Renewable Energy Directive EU/2018/2001 (RED III) and reproduced below.
- **Verifier:** A formal record is required for biomass fuels
  - from the plant's internal records, on which, the date when production of heat/or electricity began (for export or self-consumption), or
  - in the absence of self-consumption, from the relevant TSO/DSO on which, the first date of the physical connection and the injection of biomethane or electricity into the respective grids is included, and or the injection off-grid,

[8] *Relevant information means the transactions made and the sustainability characteristics of the fuels subject to those transactions, including their life-cycle greenhouse gas emissions, starting from their point of production to the moment they are placed on the market in the Union.*

or through isolated local distribution networks of BioNGV or BioLNG (specific to biomass fuels) and industrial or urban customers.

The greenhouse gas emission savings[9] from the use of biofuels, bioliquids, and biomass fuels shall be:
(a) at least 50% for biofuels, biogas consumed in the transport sector, and bioliquids produced in installations in operation on or before October 5, 2015;
(b) at least 60% for biofuels, biogas consumed in the transport sector, and bioliquids produced in installations starting operation from October 6, 2015, until December 31, 2020;
(c) at least 65% for biofuels, biogas consumed in the transport sector, and bioliquids produced in installations starting operation from January 1, 2021;
(d) for electricity, heating and cooling production from biomass fuels used in installations that started operating after 20 November 2023, at least 80 %;
(e) for electricity, heating and cooling production from biomass fuels used in installations with a total rated thermal input equal to or exceeding 10 MW that started operating between 1 January 2021 and 20 November 2023, at least 70 % until 31 December 2029, and at least 80 % from 1 January 2030;
(f) for electricity, heating and cooling production from gaseous biomass fuels used in installations with a total rated thermal input equal to or lower than 10 MW that started operating between 1 January 2021 and 20 November 2023, at least 70 % before they have been operating for 15 years, and at least 80 % after they have been in operation for 15 years;
(g) for electricity, heating and cooling production from biomass fuels used in installations with a total rated thermal input equal to or exceeding 10 MW that started operating before 1 January 2021, at least 80 % after they have been operating for 15 years, at the earliest from 1 January 2026 and at the latest from 31 December 2029;
(h) for electricity, heating and cooling production from gaseous biomass fuels used in installations with a total rated thermal input equal to or lower than 10 MW that started operating before 1 January 2021, at least 80 % after they have been operating for 15 years and at the earliest from 1 January 2026.';

Indicator 2.1.2: Whenever GHG values are used, the economic operator **shall** not calculate a mean value of GHG emissions for raw materials and/or fuels with different GHG characteristics, with the exception of biogas/biomethane.

- **Verifier:** Records.

Indicator 2.1.3: Where emission savings deviate significantly from **typical values (i.e., greater than 10%**), or calculated actual values of emissions savings are abnormally high (**greater than 30% deviation from default values**), the audit report must include information that explains these deviations". Certification bodies must immediately inform 2BSvs of such deviations.

- **Verifier:** GHG calculations records and audit reports and Revised Renewable Energy Directive EU/2018/2001 (RED III), Annexes V and VI.

Criterion 2.2: Whenever required to provide GHG emissions information, the economic operator **shall** use the appropriate value in conformity with Revised Renewable Energy Directive EU/2018/2001 (RED III), following one of the procedures described in the indicators below. GHG emission data **shall** only be included in documentation if actual values have been calculated.

[9] *Minimum greenhouse gas emissions savings for recycled carbon fuels (RCF) have yet to be published.*

Where default values are used, it is only necessary to transmit that the default value is used to simplify the administrative burden and avoid mistakes.
Therefore, downstream operators must 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 laid down in Part A or B of Annex V for biofuels and bioliquids and in Part A of Annex VI for biomethane and biomass fuels where the el value for those biofuels or bioliquids calculated following point 7 of Part C of Annex V and for those biomass fuels calculated following point 7 of Part B of Annex VI is equal to or less than zero.

Please note that default values also exist for different raw materials, such as waste cooking oil and category 1 and 2 animal fats from rendering.

Furthermore, default values for some raw materials may also depend on the process type (i.e., sugar beet ethanol, corn (maise) ethanol, palm oil biodiesel, etc.).

- **Verifier:** Evidence that annualised emissions from carbon stock changes caused by land use change (also called "e_l") are equal to or less than zero[10], and
  Verifier: GHG data for the type of biofuel in conformity with the Revised Renewable Energy Directive EU/2018/2001 (RED III) Annex V point A or B of Annex VI.
- **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: If the Commission approves, in an implementing regulation as described below, the use of 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 Revised Renewable Energy Directive EU/2018/2001 (RED III), the economic operator shall whenever appropriate, use these NUTS 2 values.

Member States may submit to the Commission reports including information on the typical greenhouse gas emissions from the cultivation of agricultural raw materials of the areas on their territory classified as level 2 in the nomenclature of territorial units for statistics (NUTS) or as a more disaggregated NUTS level following Regulation (EC) No 1059/2003 of the European Parliament and the Council, and Article 31(2) of the Revised Renewable Energy Directive EU/2018/2001 (RED III).

In the case of territories outside the Union, reports equivalent to those referred to in Article 21 (2) and drawn up by competent bodies may be submitted to the Commission.

The Commission may, through the implementing regulation, decide that these reports contain accurate data to measure the greenhouse gas emissions associated with the cultivation of agriculture biomass feedstock produced in the areas included in such information for Article 29(10).

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

Such values included in the NUTS 2 reports do **not** represent disaggregated default values. Therefore, they can only be used as an input for calculating actual values but cannot be used to report emissions from cultivation in the unit grCO2eq/MJ of biofuel.

Additionally, these values must be published in the following unit: $KgCO_{2eq}$/ dry-ton of feedstock to be considered 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
- **Verifier:** Official documents sent and recognised by the European Commission.

Indicator 2.2.3: Whenever appropriate, the economic operator **shall** use a value calculated as the sum of the terms of the formula described in 2BS-PRO-03 (and the Revised Renewable Energy Directive EU/2018/2001 (RED III), where any of the terms used may be the disaggregated default values provided in Annexes V and VI. The calculation methodology used shall be the 2BS methodology described in 2BS PRO-03.

No other methodology shall be used to calculate the actual GHG emissions generated by the production of 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 these values are not available at the country level outside of the EU, a calculation is possible only at the group farm level and not at the individual farm level.

- **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 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. It is necessary to split the total amount of emissions into all elements of the GHG emission calculation formula that are relevant. This also applies to the formula elements, which are not included in the default values, such as e_l, e_{sca}, e_{ccr} and e_{ccs}. Relevant information comprises a detailed description of the industrial process, data collected on-site or from literature, and the description of the calculation tool used if it is a "specific" tool. In the case of unusual data, an explanation must be provided
This documentation must be available in advance of the audit.

- **Verifier:** documentation describing the process, and
- **Verifier:** documentation relating all internal data and data coming from literature, and
- **Verifier:** explanation in case of non-usual data used, and
- **Verifier:** the total amount of emissions split 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
- **Verifier:** Self-declaration and decision tree

- **Verifier:** Document completed by the supplier including the esca cap (45gCO2eq/MJ or 25gCO2eq/MJ) to be applied[11]

Indicator 2.2.5: For esca factor, a bonus of 45 g CO2eq/MJ manure shall be attributed for improved agricultural and manure management in the case animal manure is used as a substrate **for the production of biogas and biomethane.**

- **Verifier:** Manure production and storage capacity
- **Verifier:** Monthly quantity entered into the digester

Indicator 2.2.6: Biogenic wastes and residues, as well as landfill gas are considered to have zero GHG emissions at the point of arising/origin, i.e., at the process where they are created.

So, a GHG emissions calculation shall be done from the "point of origin".

However, specific waste and residue feedstocks can be considered to have zero GHG emissions to the point of the collection according to Revised Renewable Energy Directive EU/2018/2001 (RED III). Wastes and residues, including all wastes and residues included in Annex IX shall be considered to have zero life-cycle greenhouse gas emissions up to the process of collection irrespective of whether they are processed to interim products before being transformed into the final product.

- **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 raw materials and fuels in addition to the GHG information associated with the final fuel.

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, wastes or residues used for the production of the fuel

- **Verifier:** Mass balance / Credit account.
- **Verifier:** Self-declaration and decision tree

Criterion 2.4: The last economic operator certified in the fuels production chain or the bioenergy producer (the last interface) **shall** ensure that GHG emission savings over the whole fuels production and supply chain shall be as detailed in **Principle 2: Greenhouse gas emission savings.**

Sustainability claims are only to be made for fuels 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 fuel supply chain to demonstrate 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.

[11] See 2BS-PRO-03 to understand the esca cap allocation (paragraph)

- **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 using a specific default value.

Indicator 2.4.2: The economic operator **shall** ensure that sustainability claims are only made for fuels that meet the minimum required GHG savings target throughout the fuel 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 explicitly referencing the minimum required GHG savings target.

Principle 3: Co-processing

Criterion 3.1: The economic operator applying for compliance shall ensure that all biogenic feedstock used in co-processing meet the requirements set forth in the 2BS voluntary scheme.

Indicator 3.1.1 (Major Indicator): The economic operator **shall** have documented procedure to describe the co-processing approach.

- **Verifier:** Procedure
- **Verifier:** Mapping of the processes and facilities, and starting date of operations when available
- **Verifier:** List of all sites covered**.**

Indicator 3.1.2 (Major Indicator): The economic operator shall review the sourcing and eligibility of biogenic feedstock to ensure compliance with the established criteria.

- **Verifier:** Lists of biogenic feedstocks and their origin including details on their compliance status
- **Verifier:** Access to the RED III certificate for each batch of biogenic feedstock (if applicable)

Indicator 3.1.3: The economic operator shall conduct an inspection of records to ensure that non-compliant materials are systematically excluded from the production process. The operator may implement monitoring procedures and maintain documentation to verify that only compliant materials are used.

- **Verifier:** Procedure
- **Verifier:** Mass balance

Criterion 3.2: The economic operator applying for compliance shall ensure that test methods for determining the biogenic share are accurate and verified, especially when using methods other than radiocarbon (14C).

Indicator 3.2.1 (Major indicator): The economic operator shall implement a procedure to document and describe the test methodologies used, including radiocarbon (C14) verification when applicable.

- **Verifier:** Procedure that details the main methodology used as well as the verification method with radiocarbon (C14) when applicable
- **Verifier:** Specific calibration and validation records for the testing equipment.
- **Verifier:** List of processing units covered by each methodology

Indicator 3.2.2 (Major indicator): The economic operator shall apply the methodology described and maintain detailed records of periodic testing and calibration. The operator may review these records regularly to ensure accuracy and address any discrepancies promptly.

- **Verifier:** Records of test results, including periodic verification logs
- **Verifier:** Records of deviations and corrections made
- **Verifier:** Samples and records available for at least 2 years

Indicator 3.2.3 (Major Indicator): The economic operator shall apply the radiocarbon (14C) method as a verification measure at least every 4 months and maintain detailed records of the results.

- **Verifier:** Record of test results with radiocarbon (C14) method
- **Verifier:** Records of deviations and corrections made to the main method
- **Verifier:** Periodicity of radiocarbon (C14) verification method based on the complexity and variability of the fundamental co-processing parameters.

Criterion 3.3 : The economic operator shall have developed and documented a control system for the feedstock and/or fuels it receives based on a mass balance system at the level of a container, processing or logistical facility, transmission and distribution infrastructure or site to ensure that "sustainability characteristics" remain assigned to "consignments", and which achieves balance over an appropriate time.

Indicator 3.3.1 The economic operator shall report all incoming quantities and types of feedstocks entering the co-processing site, ensuring detailed tracking and documentation.

- **Verifier:** Lists of biogenic feedstocks and their origin, including details on their compliance status.
- **Verifier:** Delivery slips with quantities delivered for each batch of feedstocks.
- **Verifier:** Specific mass balance calculations for co-processed biofuel.
- **Verifier:** Consistency checks of input quantities against the quantities recorded on sourcing delivery slips.

Indicator 3.3.2 : The economic operator shall report the co-processing outputs in terms of biogenic quotas within the Mass Balance, ensuring accurate documentation of the biogenic share in both inputs and outputs. The operator may ensure precision by utilizing a reliable mass balance system and performing cross-verifications with test results and chain of custody records.

- **Verifier:** Global mass balance system indicating the biogenic share of inputs and outputs.

- **Verifier:** Information on the accuracy and precision of the test method used for each output.
- **Verifier:** Cross-verification with test results and chain of custody documentation.

Indicator 3.3.3 (Major Indicator) : The economic operator shall ensure the avoidance of double counting for hydrogen from renewable origin, maintaining clear and accurate records of its use.

- **Verifier:** Documentation of the origin of the hydrogen.
- **Verifier:** Evidence that the hydrogen entering the processing unit was not accounted as renewable energy elsewhere.
- **Verifier:** Records showing that the hydrogen has been incorporated into the final biofuel.

Criterion 3.4 : The economic operator shall have developed and documented a traceability system ensuring that a traceability document is provided with each batch of co-processed output produced, detailing its origin, greenhouse gas emissions, and sustainability characteristics.

Indicator 3.4.1 (Critical Indicator) : The economic operator shall ensure that all traceability documents accurately reflect the biogenic content and compliance with sustainability criteria for each co-processed batch.

- **Verifier:** Review of sustainability declarations / proof of sustainability issued for co-processed batches.
- **Verifier:** Cross-verification with mass balance records.
- **Verifier:** Sustainability declaration / proof of sustainability containing all required information.

Criterion 3.5 : The economic operators shall apply the requirements of Revised Renewable Energy Directive EU/2018/2001 (RED III) and the Commission delegated regulation (EU) 2023/1640 regarding greenhouse gas emission calculation.

Indicator 3.5.1 (Major Indicator): The economic operator shall ensure that all conversion factors used are documented and aligned with methodologies such as mass balance, energy content, incremental yield, and radiocarbon analysis. The operator may maintain detailed records of these conversion factors and the methodologies used for their calculation.

- **Verifier:** Access to documented conversion factors and the methodology used for their calculation.

Indicator 3.5.2 : The economic operator shall maintain records that detail how conversion factors are applied to specific products and processes, ensuring accurate tracking and consistency.

- **Verifier:** Lists of products with their co-processing conditions and associated conversion factors used.
- **Verifier:** Specific records demonstrating the application of these factors in production processes.

Indicator 3.5.3 : The economic operator shall compare conversion factors used in their processes against national legislation to ensure compliance with applicable laws. Nationally set conversion factors must always take precedence for operators and facilities within the respective country.

- **Verifier:** National conversion factors (if applicable).

- **Verifier:** Review of compliance with national legislation regarding conversion factors.

Indicator 3.5.4 : The economic operator shall ensure the exclusion of certain GHG emissions from solid, liquid, or gaseous waste and residues produced during co-processing, such as carbon dioxide, water, and carbon pitch. However, GHG emissions must be allocated to coproducts like methane, ethane, and carbon monoxide unless specified otherwise by EU or national legislation. CO2 emissions from biogenic origin should not be counted.

- **Verifier:** List of solid, liquid, or gaseous waste and residues produced during co-processing.
- **Verifier:** GHG emissions allocated to each product.

Definitions

- **'Advanced biofuels'** means biofuels that are produced from the feedstock listed in Part A of Annex IX of Revised Renewable Energy Directive EU/2018/2001 (RED III)
- **'Agricultural, aquaculture, fisheries and forestry residues'** means residues directly generated by agriculture, aquaculture, fisheries and forestry; they do not include residues from related industries or processing.
- **'Agricultural biomass'** means biomass produced from agriculture;
- **'Biofuels'** means liquid fuel for transport produced from biomass
- **'Biogas'** means gaseous fuels produced from biomass;
- **'Bioliquids'** means liquid fuel for energy purposes other than for transport, including electricity and heating and cooling, produced from biomass;
- **'Biomass'** means the biodegradable fraction of products, waste and residues of biological origin from agriculture, including vegetal and animal substances, from forestry and related industries, including fisheries and aquaculture, as well as the biodegradable fraction of waste, including industrial and municipal waste of biological origin;
- **'Biomass fuels'** means gaseous and solid fuels produced from biomass;
- **'Biowaste'** means biowaste as defined in point (4) of Article 3 of Directive 2008/98/EC;
- **'Food and feed crops'** mean starch-rich crops, sugar crops or oil crops produced on agricultural land as the main crop, excluding residues, waste or lignocellulosic material and intermediate crops, such as catch crops and cover crops, provided that the use of such intermediate crops does not trigger demand for additional land;
- **'Forest biomass'** means biomass produced from forestry;
- **'Forest regeneration'** means the re-establishment of a forest stand by natural or artificial means following the removal of the previous stand by felling or as a result of natural causes, including fire or storm;
- **'Intermediate crops'** means crops, such as catch crops and cover crops that are grown in areas where due to a short vegetation period the production of food and feed crops is limited to one harvest and provided their use does not trigger demand for additional land, and provided the soil organic matter content is maintained,. This definition is pending clarified guidelines from the EU Commission.
- **'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

- **'Low indirect land-use change-risk biofuels, bioliquids and biomass fuels'** means biofuels, bioliquids and biomass fuels, the feedstock of which was produced within schemes which avoid displacement effects of food and feed-crop-based biofuels, bioliquids and biomass fuels through improved agricultural practices as well as through the cultivation of crops on areas which were previously not used for cultivation of crops, and which were produced in accordance with the sustainability criteria for biofuels, bioliquids and biomass fuels laid down in Article 29 of Revised Renewable Energy Directive EU/2018/2001 (RED III).

- **'Mix of raw material for further processing'** means the physical mixing of raw material **at the fuel production plant** for the sole purpose of producing biofuels, bioliquids, or biomass fuels;

- **'Non-food cellulosic material'** means feedstock mainly composed of cellulose and hemicellulose and has a lower lignin content than lignocellulosic material, including 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; cover crops before and after main crops; ley crops; industrial residues, including from food and feed crops after vegetal oils, sugars, starches and protein have been extracted; and material from biowaste. Where ley and cover crops are understood to be temporary, short-term sown pastures comprising grass-legume mixture with a low starch content to obtain fodder for livestock and improve soil fertility for getting higher yields of main arable crops;

- **'Recycled carbon fuels'** means liquid and gaseous fuels that are produced from a liquid or solid waste streams of non-renewable origin which are not suitable for material recovery following Article 4 of Directive 2008/98/EC, or from waste processing gas and exhaust gas of non-renewable source which is produced as an unavoidable and unintentional consequence of the production process in industrial installations.

- **'Renewable fuels of non-biological origin'** means liquid or gaseous fuels the energy content of which is derived from renewable sources other than biomass.

- **'Residue'** means a substance that is not the end product(s) that a production process directly seeks to produce; it is not a primary aim of the production process, and the process has not been deliberately modified to make it;

- **'Sourcing area'** means the geographically defined area from which the forest biomass feedstock is sourced, from which reliable and independent information is available and where conditions are sufficiently homogeneous to evaluate the risk of the sustainability and legality characteristics of the forest biomass;

- **'Waste'** means waste as defined in point (1) of Article 3 of Directive 2008/98/EC, excluding substances that have been intentionally modified or contaminated to meet this definition;

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