
2BS
SUSTAINABILITY CERTIFICATION
BIOMASS
BIOFUEL
SUSTAINABILITY
2BS vs
voluntary scheme

MEET TODAY'S *SPEAKERS*

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Before we go forward, we would like to hear from you:

HOW FAMILIAR ARE YOU WITH THE IMPLEMENTATION REGULATION 2022/996?

Context

What is RED II ?

The Renewable Energy Directive (RED) is Directive 2018/2001 published by the European Commission on December 11, 2018.

32%

the European Union's overall target for renewable energy consumption by 2030*.

What is its purpose?

The aim is to promote energy produced from renewable sources and thus help reduce greenhouse gas (GHG) emissions in European countries.

What's the impact for biogas producers?

Under RED II, sustainability certification for biogas sites will be mandatory from July 1, 2023*** for installations with a capacity higher than :

- 19,5 GWh /year
- 200 Nm³/h
- 2MW
- 800 KWh**

** Source: European Commission website*
*** For cogeneration sites*
**** For France, the DGEC grants a delay for the completion of the audit, which can be done until January 1, 2024. However, proof of appointment must be sent to the DREAL before 30/06/2023.*

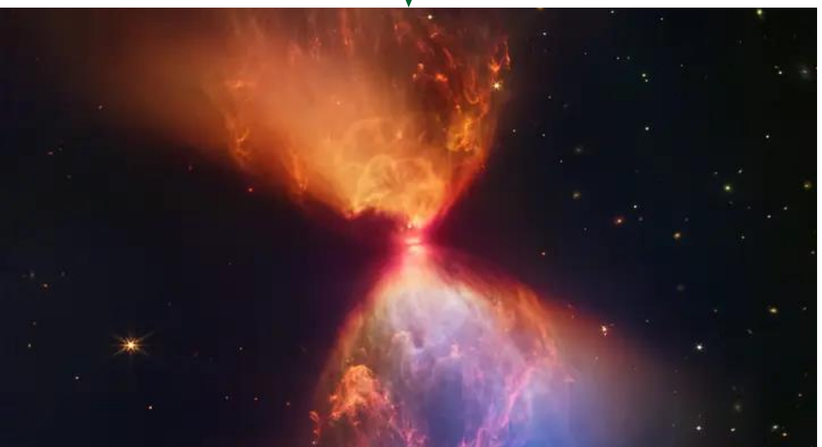
SUSTAINABILITY CERTIFICATION

2BS is a non-profit organization,

created in 2011, when leading experts from the agricultural and fuel industries teamed up to develop a sustainability certification to value virtuous agricultural practices.

Our guidelines cover the entire chain

from the first collection points to traders and transformation units. We support customers in demonstrating compliance with RED II, giving them access to the biofuels market!



Our guidelines meet the Renewable Energy Directive (RED II),

and our certification is recognized by the European Commission under the RED II. We work with representatives from the industry to develop and validate our guidelines.

2BS IN NUMBERS

we operate in
20+
countries

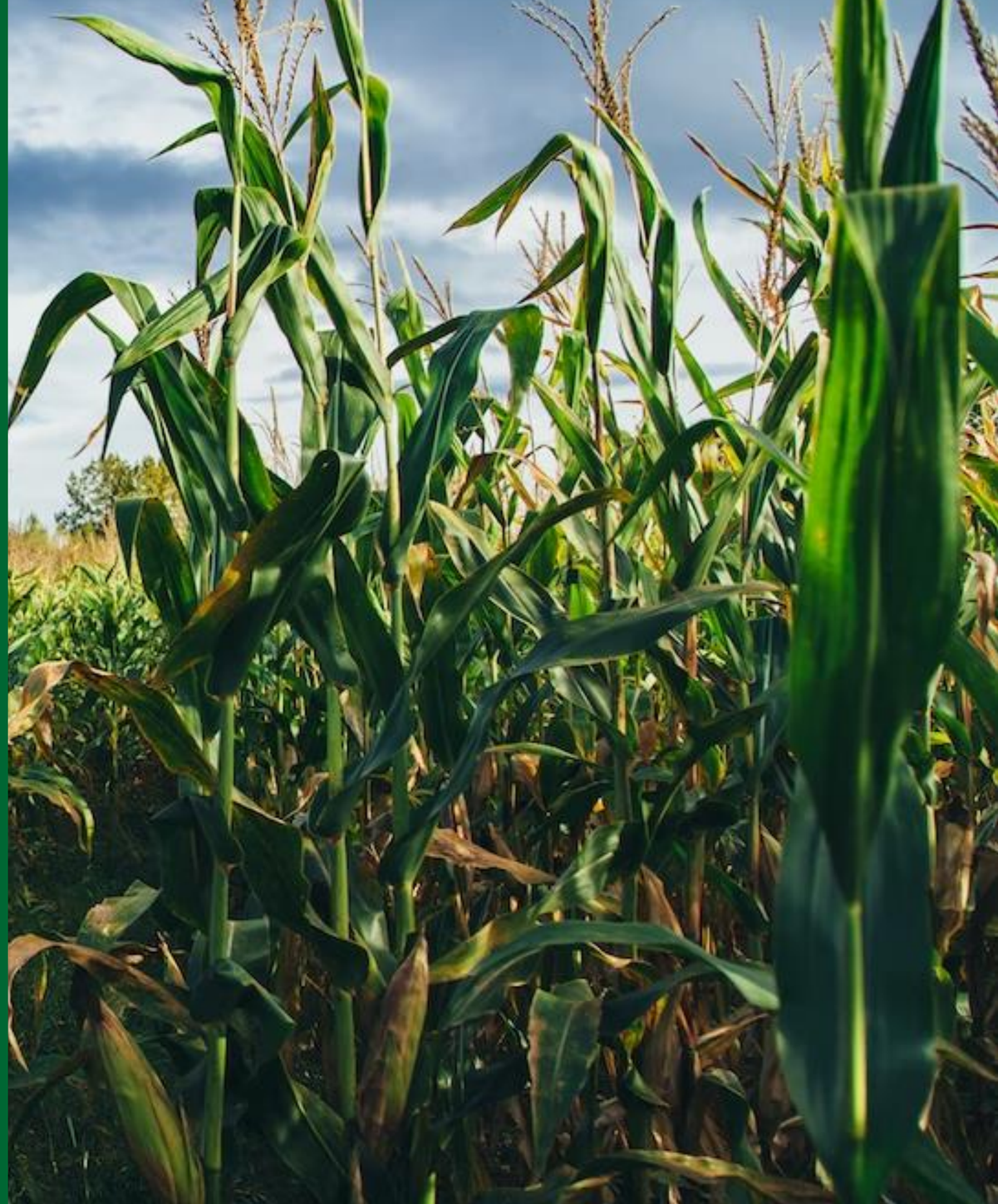
10+
years of experience in sustainability certification

700+
certifications in Europe and Latin America

580+
customers

30K+
farmers concerned via the certified First Gathering Points

6
certification Bodies referenced and trained



2BS VOLUNTARY SCHEME

Certification

2BS has developed the 2BSvs certification, based on the RED II Directive.

This certification is applicable to all organizations in the production and distribution chain of biofuels, bioliquids and biogas, worldwide, who want to sell their products in the European Union

Our certificate

2BS works with referenced certification bodies trained by our team to carry out accreditation audits.

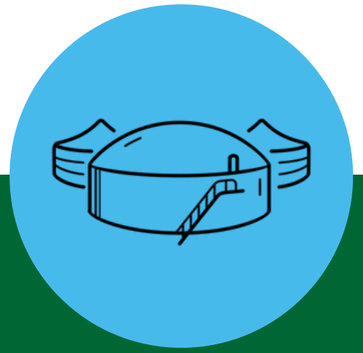
The 2BSvs certificate is valid for 5 years, provided that annual audits are organized.

Recognition

Our sustainability certification is recognized by the European Commission, enabling products to be marketed under the "sustainable" label.

The 2BS certificate is equivalent to and enforceable against all Voluntary Schemes recognized by the European Commission.

SCOPES OF CERTIFICATION



BIOGAS & BIOMETHANE SITES

AGRICULTURAL BIOMASS

WASTE AND RESIDUES

BIOFUELS & BIOLIQUIDS

AGRICULTURAL BIOMASS

WASTE AND RESIDUES

INTERMEDIARY PRODUCT

OUR GOAL TODAY

The Commission implementing regulations 2022-996

Last year, the European Commission published the Commission Implementing Regulation 2022-996. This document introduced new technical references to the RED II, directly impacting the sustainability certification process throughout the fuel market.

2BS has developed its Biogaz specifications according to the new references

2BS has submitted its specifications for biogas/biomethane certification to the European Commission in order to comply with the regulations. This documentation was initially validated and enabled the initiation of audits in the methanization sector.
However, certain changes had to be made, and our specifications were resubmitted to the European Commission. The European Commission is currently reviewing the documentation of all recognized schemes for harmonization.

Implementation deadlines

To help you get ready for the changes to our guidelines, you can already find the documents as submitted to the European Commission on the 2BS website. We have also prepared a document where you may find a brief explanation of the changing points per stakeholder, and we are hosting this webinar to go even further on explanations.

Please bear in mind that minor modifications are expected to 2BS updated Standards and Procedures. As soon as we have the final documents, the present material will be updated.

THE BIOGAS CHAIN

DEMONSTRATION OF SUSTAINABILITY (RED II)

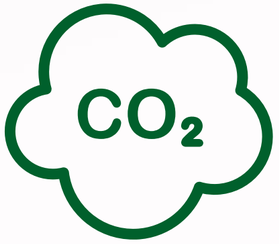
Axis 1: Sustainability of land and raw materials

- Vegetable feedstock for an anaerobic digester must come from sustainable plots of land. It cannot come from land with a high biodiversity potential or from deforested land, for example.
- Waste and residues must respect the principles of the circular economy and meet the definition of waste set out in the Directive.

Axis 2: Greenhouse gas emissions

To reduce greenhouse gas (GHG) emissions, biogas has to be more virtuous than fossil fuels.

To demonstrate this, biogas producers and traders calculate total emissions in g(CO2)/MWh of biogas.
Note: the required GHG emission reduction threshold is calculated according to the use and commissioning date of the facilities.



THE AXES OF OUR CERTIFICATION

biogas & biomethane

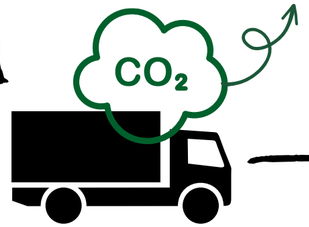
2BS-STD-01

Agricultural raw materials

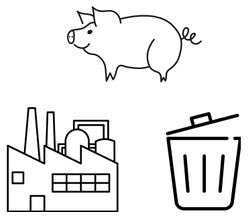
- Verification of plot sustainability (2BS Mapping tool, Geoportail)
- Verification of mass balance (tonnage, BMP, GHG emissions)
- Self-declarations

CO_2 Indirect emissions, calculated by input and emission factor.

Transport emissions - Raw materials



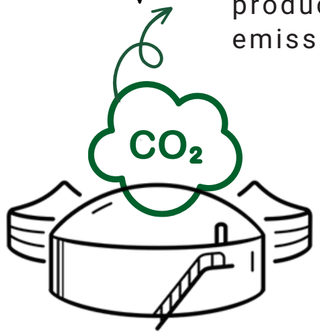
Raw materials waste & residues



- Verification of points of origin
- Verification of mass balance (tonnage, BMP)
- Self-declarations

2BS-STD-02

Direct emissions, calculated in relation to processes specific to the biogas and biomethane production site, as well as fugitive emissions.

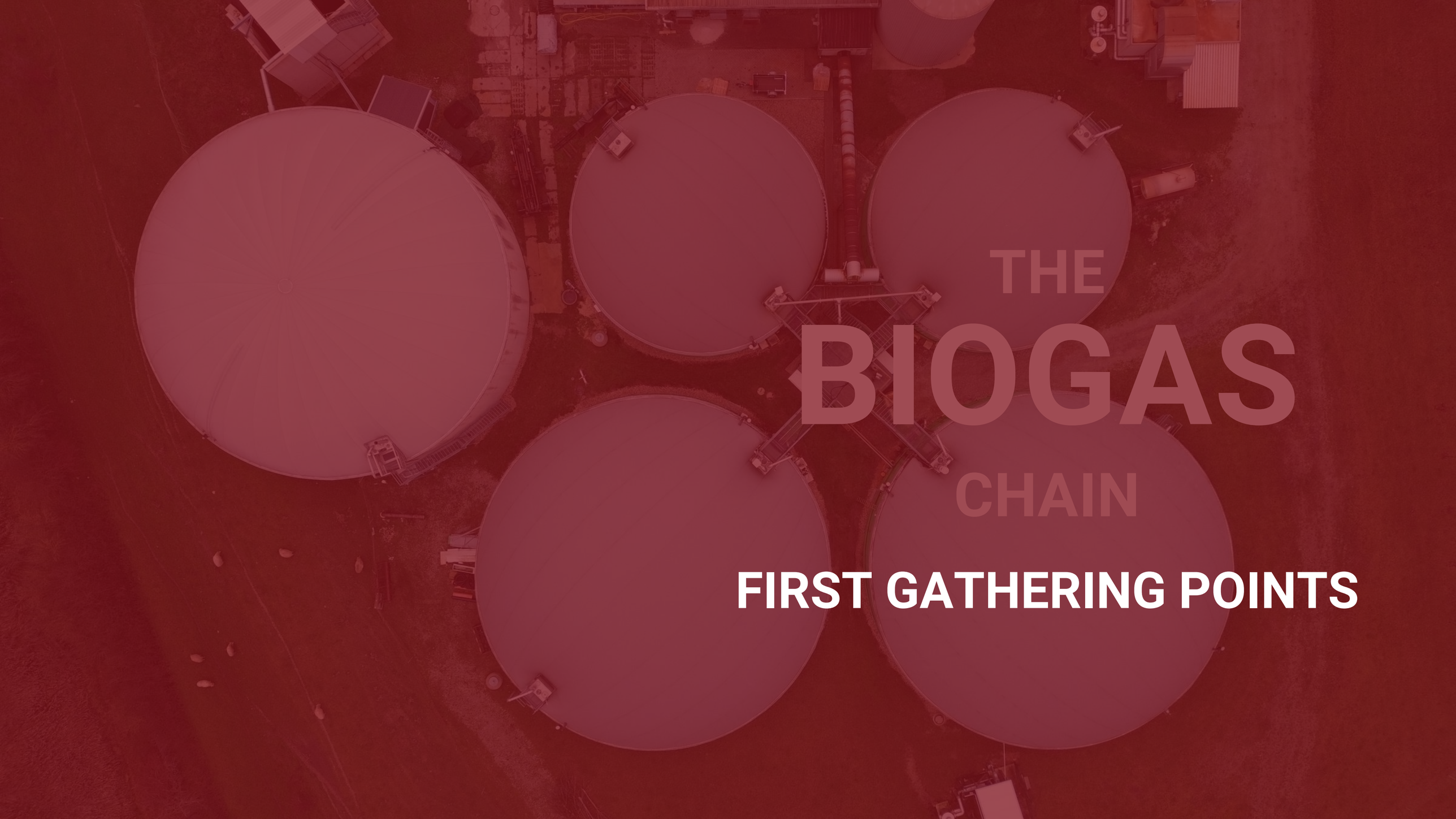


Methanization unit (last interface)

- Calculation of total GHG emissions (gCO2eq/MWh biomethane)
- Check mass balance (inputs, tonnage, BMP)

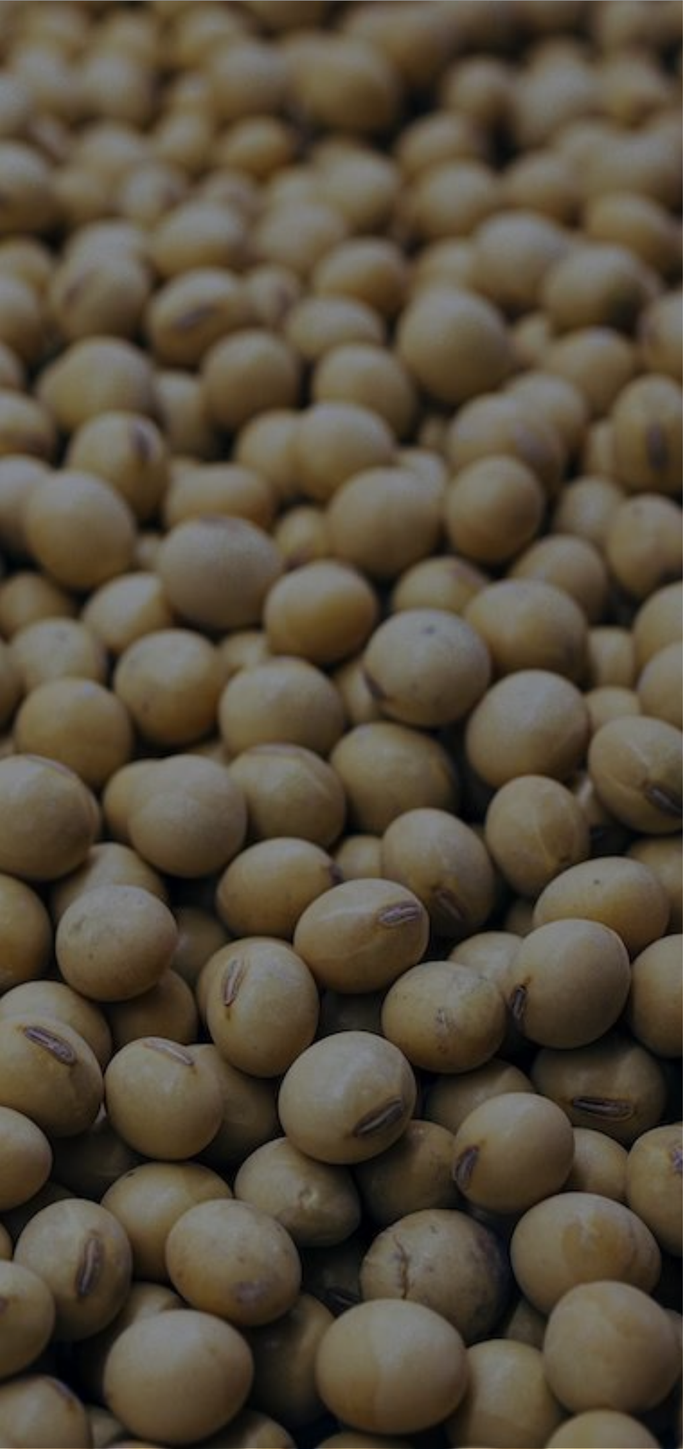
Sustainable batch of biogas

- Data concerning proof of durability to be transmitted to downstream third parties (administration, customers)
- Union Database



THE BIOGAS CHAIN

FIRST GATHERING POINTS

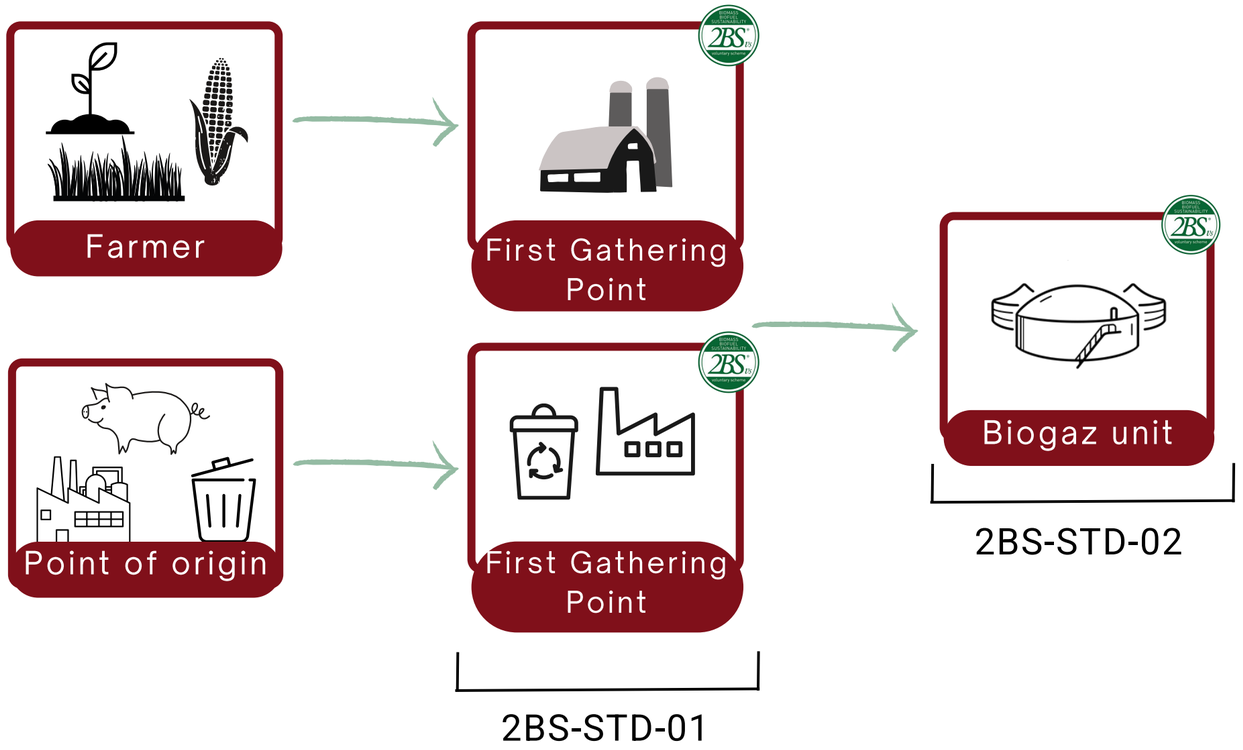


WHAT ARE FIRST GATHERING POINTS?

Definition

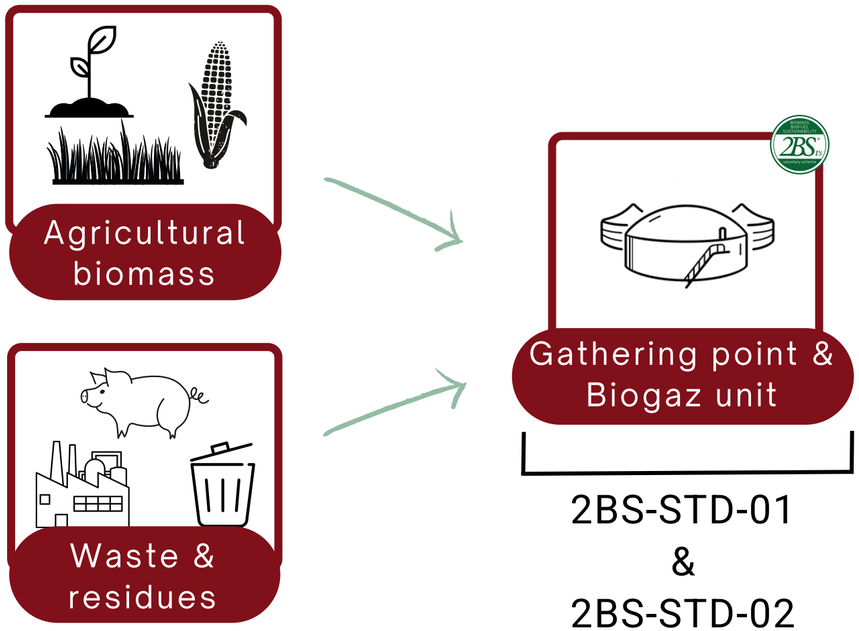
Customer (Economic Operator, in the Directive language) that collects agricultural biomass (from farmers) or waste & residues (from point of origin) and dispatch them for further processing into biogas

Methanisation sites have 3 possibilities:

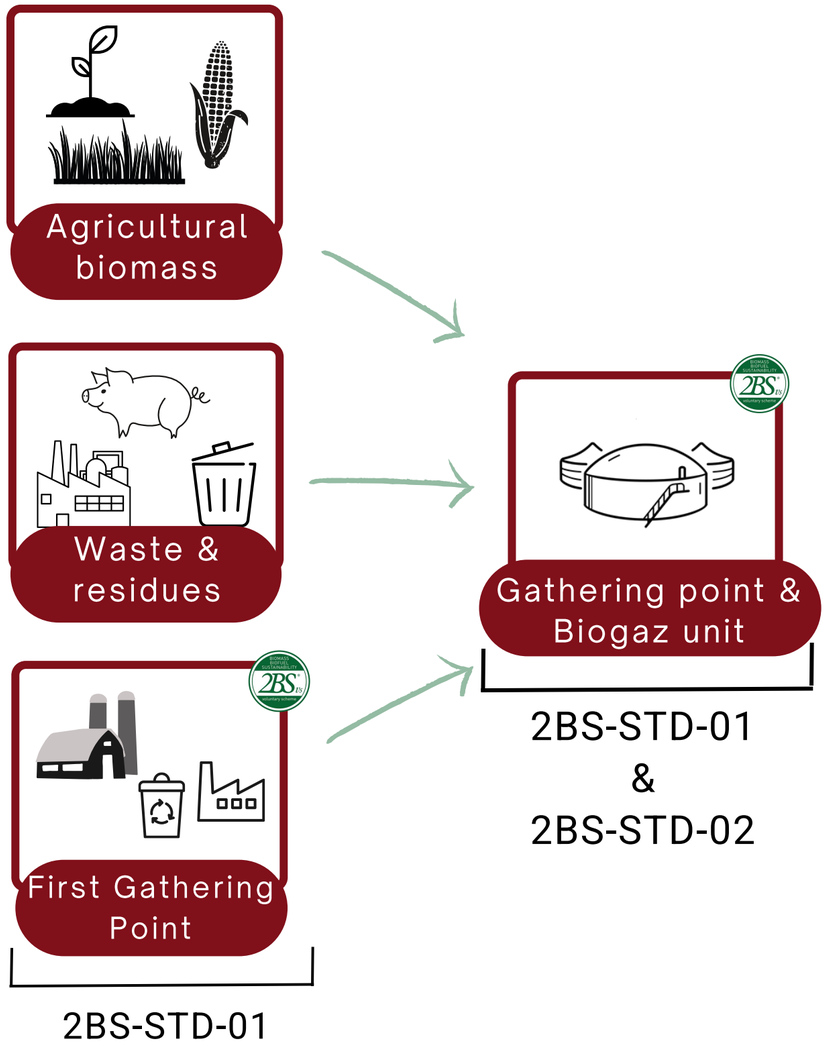


1. The site collects its inputs from other certified first gathering points. In this case, the methanisation site will be considered as a last interface;

2 The site produces its own inputs. In this case, the site is considered as a gathering point and a last interface



3 The site may combine the two possibilities above



USAGE CONFLICTS (WASTE & RESIDUES)

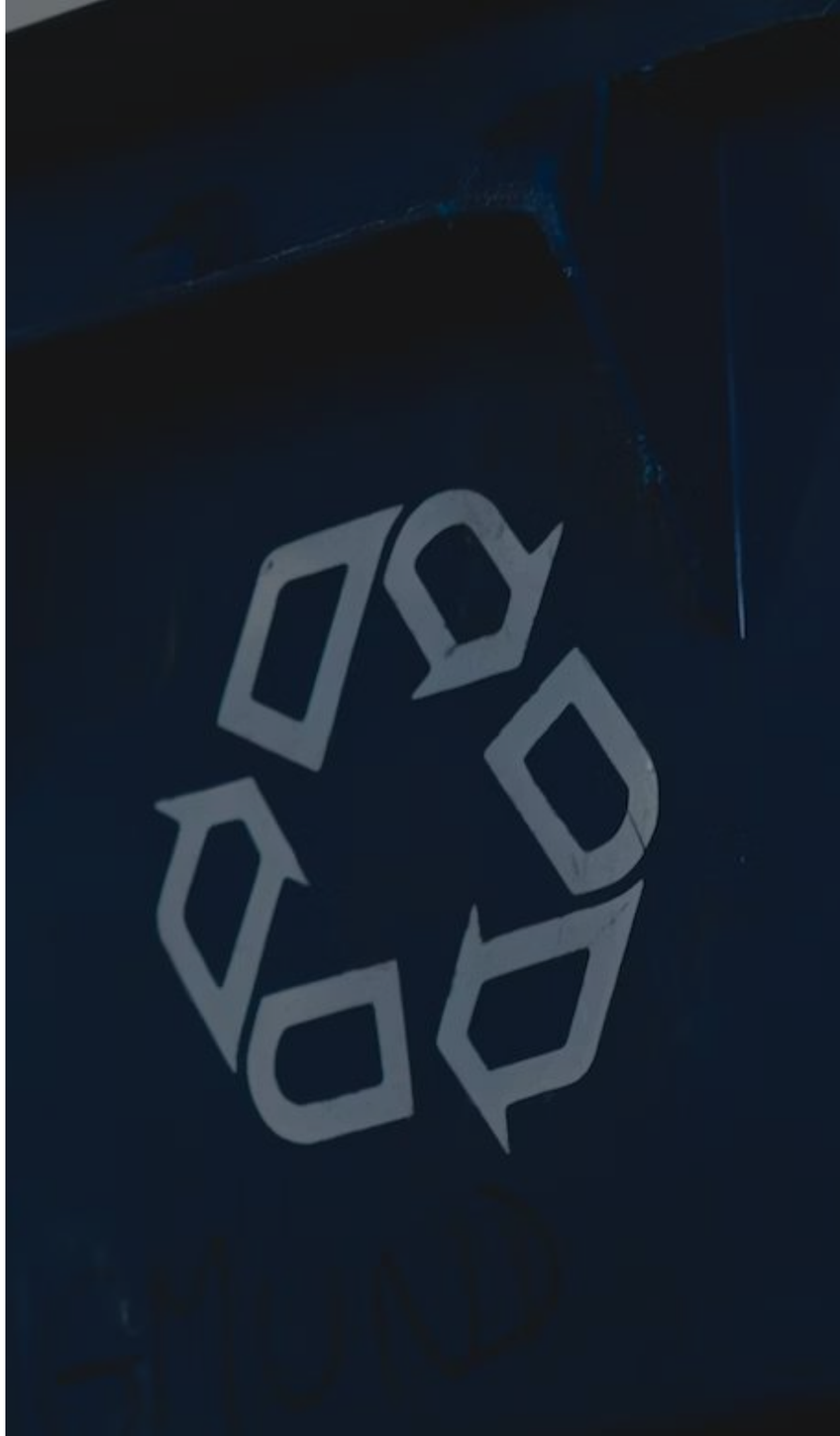
Goal: to determine the status of a raw material

- **Waste definition**: any substance or object that the holder discards or intends or is required to discard;
- **Processing residue** is a substance that is not the end product(s) that a production process directly seeks to produce, and the process has not been deliberately modified to produce it;

↳ Zero GHG emissions to the point of origin
GHG emissions associated with the transport from the point of origin up to the FGP must be considered

- **Co-products** are different from residues and agricultural residues, as they are the primary aim of the production process.

↳ Positive GHG emissions at the point of origin- as such these emissions have to be taken into account



SOIL SUSTAINABILITY

Addition of a principle concerning the impact of collecting agricultural residues (straw)

Goal: better management of the soil quality and carbon sequestration

To re-balance CO2 storage, **a management plan for soils shall be put in place**, determining the initial status of the soil and the monitoring of agricultural techniques to improve the CO2 balance in the soil.

There is a national law

- Management plan required by the law
- Evidences enabling validation by national authorities
- Self declaration

There is no national law

- Management plan taking into account : soil quality, soil contamination, and soil erosion
- Evidences enabling validation by a competent individual, a professional agronomy advisor/ consultant, or a research institution’s advice
- Self declaration

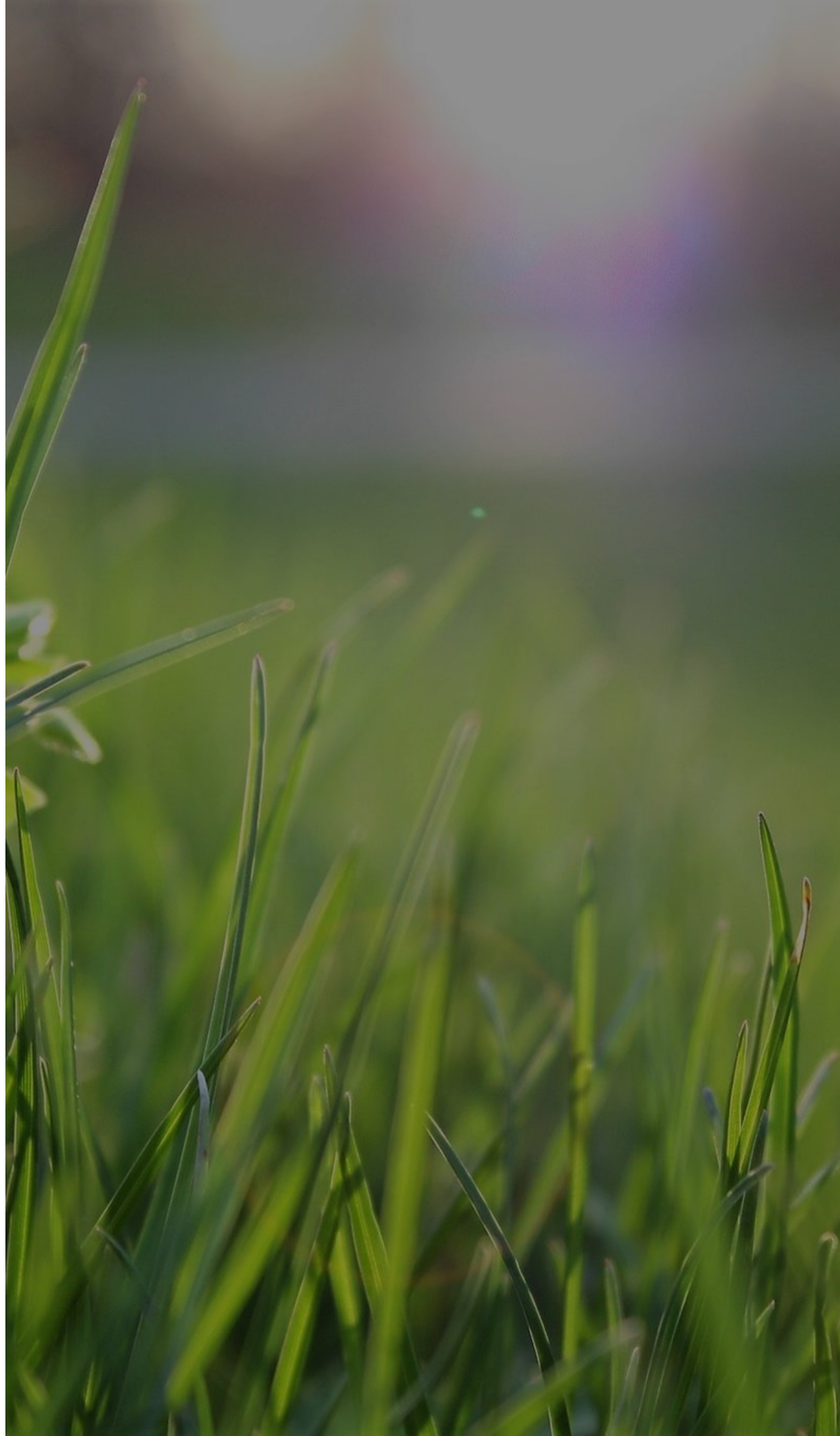
BIODIVERSITY - HARVESTING GRASS FROM NON-NATURAL GRASSLANDS

VALIDATION FROM COMPETENT AUTHORITIES FOR HARVESTING GRASS FROM NON-NATURAL GRASSLANDS

Goal: to preserve biodiversity

Harvesting grass from non-natural grasslands is authorized, provided that local authorities have validated that:

- the harvesting of the raw material is necessary to preserve the status of highly bio-diverse grassland, and
- this practice does not represent a risk of a decline in the biodiversity of grasslands.



GHG EMISSIONS - EEC FACTOR

UPDATES TO THE CRITERIA FOR THE CALCULATION OF GHG EMISSIONS WHEN USING ACTUAL VALUES

Goal: align with the latest changes to the 2006 IPCC guidelines

Eec, one of the factors used in the emissions calculation formula, represents **Emissions from the Extraction or Cultivation of raw materials.**

$$E = \sum_{1}^{n} S_n \cdot (e_{ec,n} + e_{td,feedstock,n} + e_{l,n} - e_{sca,n}) + e_p + e_{td,product} + e_u - e_{ccs} - e_{ccr}$$

- The amount of fuel used for field preparation, seeding, fertilizer and pesticide application, harvesting and collection of raw materials, and their transportation to storage
- The emissions from drying the seeds before storage as well as from handling and storage of biomass feedstock;
- Upstream emissions such as the production and transport of chemical fertilizers and pesticides up to the farm;
- The emissions from fertilizer acidification and liming application for nitrogen fertilizers or for reactions of agricultural lime in soil;
- Soil (nitrous oxide/N20) emissions from cultivation (Tier 2 of the IPCC methodology) with specific emission factors for different environmental conditions, soil conditions, and different crops).

GHG EMISSIONS - ESCA FACTOR

UPDATE OF THE ESCA METHODOLOGICAL APPROACH

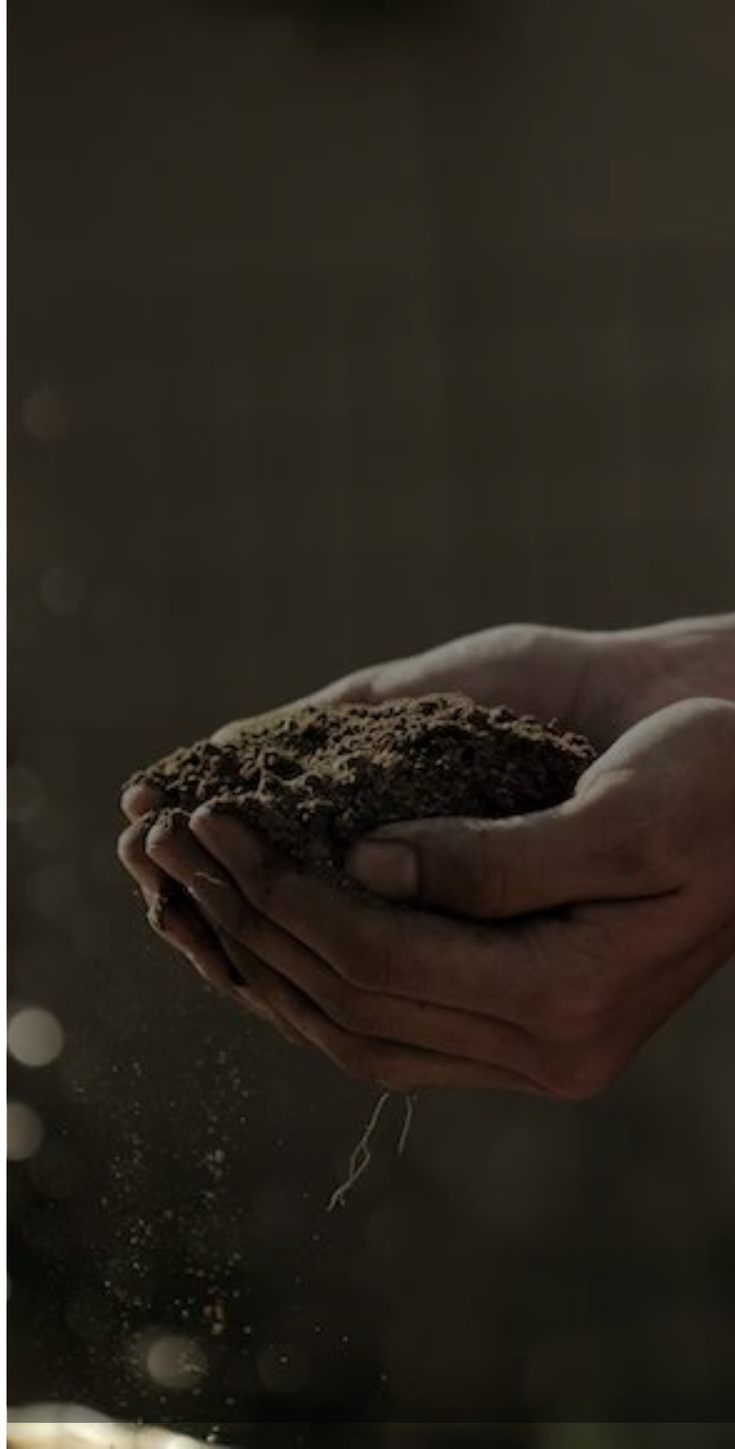
Goal: to align esca methodology with the latest protocol of the EU

Esca, one of the factors used in the formula for emissions calculations, represents Emission savings from **Soil Carbon Accumulation through improved agricultural management.**

$$E = \sum_{1}^{n} S_n \cdot (e_{ec,n} + e_{td,feedstock,n} + e_{l,n} + e_{sca,n}) + e_p + e_{td,product} + e_u - e_{ccs} - e_{ccr}$$

The new methodology allows economic operators to benefit from a bonus of **45 gCO2eq/MJ of manure** when animal manure is used as a substrate for biogas and biomethane production.

We are preparing dedicated guidelines on our updated esca methodology that will be shared with you shortly. In the meantime, you may consult the updated official document on our website (2BS-PRO-03).



GHG EMISSIONS - CALCULATION

REMINDER

$$E = \sum_{1}^{n} S_n \cdot (e_{ec,n} + e_{td,feedstock,n} + e_{l,n} - e_{sca,n}) + e_p + e_{td,product} + e_u - e_{ccs} - e_{ccr}$$

Eu, represents emissions from the **fuel in use**, that is greenhouse gases emitted during combustion of the cogenerator unit

↳ Different from zero

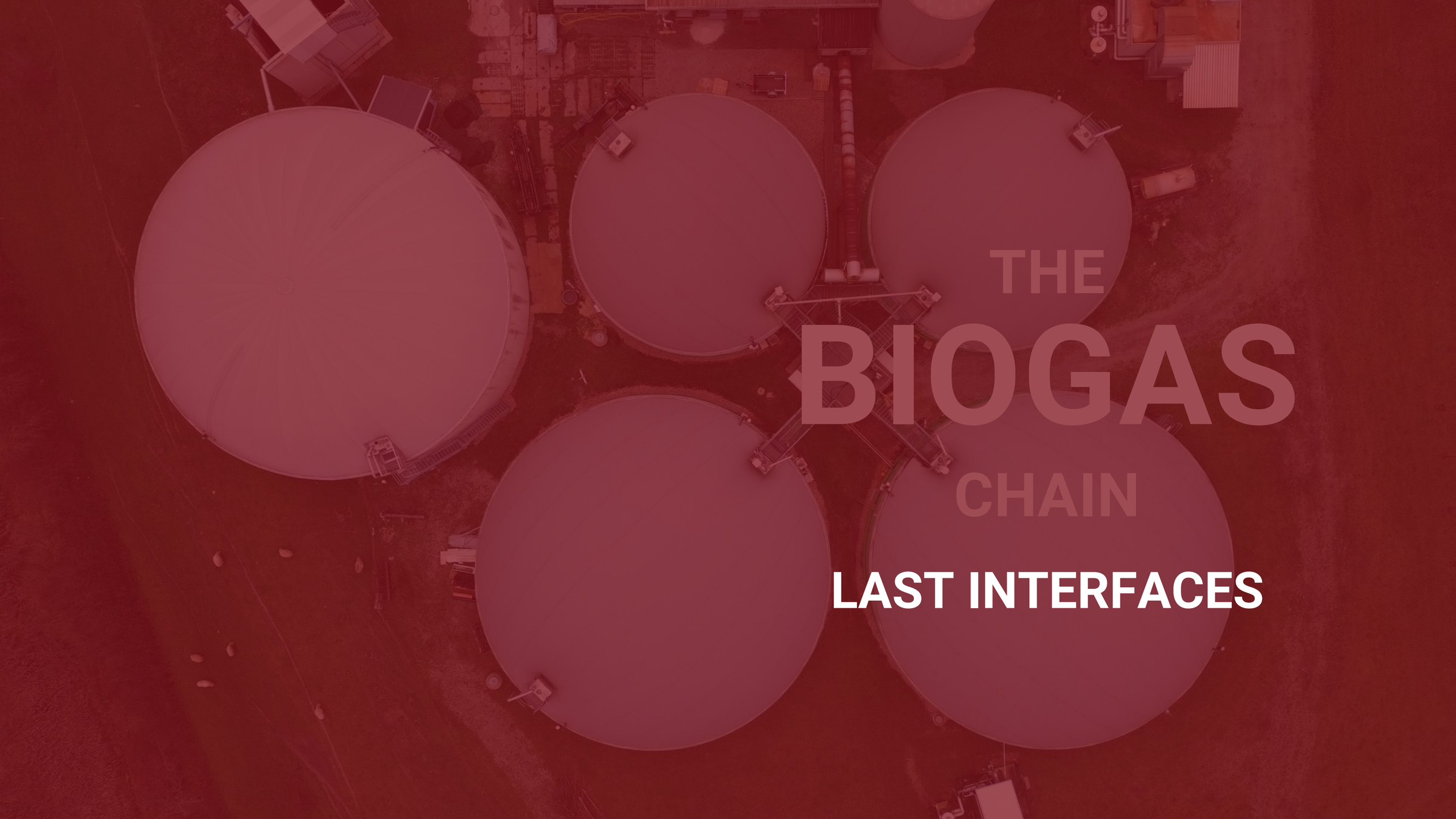
2BS recognizes several calculators: Meo Carbon, France gaz Renouvelable.

Link to FGR calculator: https://methaniseur-red2.gazrenouvelables.fr/

Link to the FGR tool presentation: https://www.youtube.com/watch?v=WDk_nrfSXLk

ANY QUESTIONS ?

Please, submit your questions via the Q&A button!



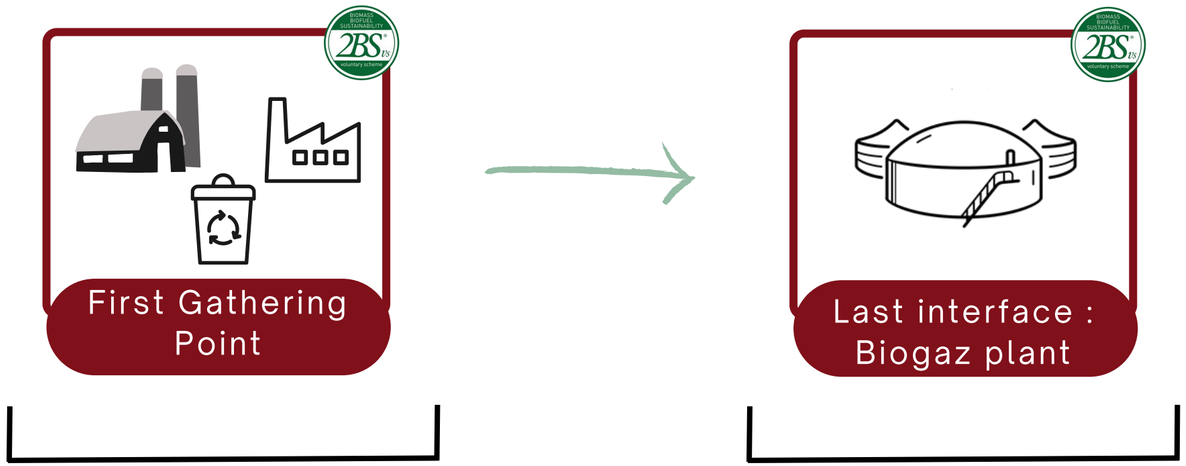
THE BIOGAS CHAIN

LAST INTERFACES

WHAT ARE LAST INTERFACES?

Definition

This is the customer (Economic Operator, in the Directive language) that transforms agricultural biomass or waste & residues into biogas.



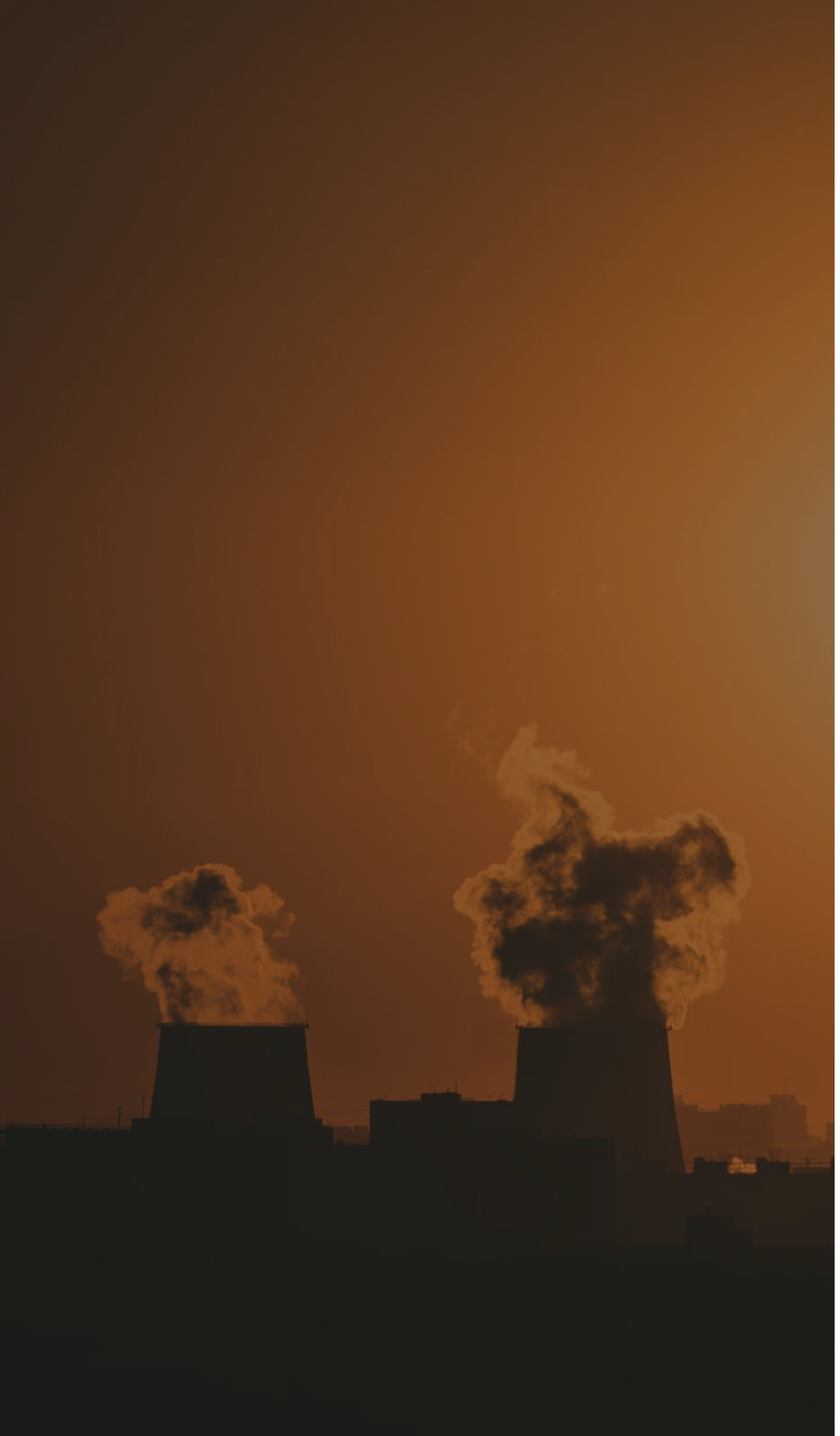
ACTUAL GHG EMISSIONS

JUSTIFICATION OF THE GHG EMISSIONS CALCULATION WHEN THERE IS 10% OR MORE DIFFERENCE BETWEEN TYPICAL VALUES AND ACTUAL VALUES

Goal: strict control of the calculation of GHG emissions when using actual values

During an audit, a **Last Interface** shall justify the percentage of GHG reduction whenever it is **10% or more** from the typical value of the applicable biomass fuel production system (Annex VI)

The audit report shall contain the reasons justifying the gap.



GAS LEAK DETECTION / CORRECTION REGISTER

LEAK DETECTION / CORRECTION REGISTERS MUST BE CONTROLLED DURING AUDITS

Goal: to control gas leakage

<u>Off-grid gas leaks:</u>

The methanization plant must periodically carry out leak tests on its installation: CH4 emissions in exhaust gases must not exceed 0.5% of the total volume of biomethane produced.

- Keeping fugitive emissions to a minimum through plant management
- Carry out a leak test on your plant twice a year
- Proof of measurements and verification carried out
- Flare in operation is recommended.

The 2BS auditor must ensure that checks are carried out and corrective action taken where necessary.

PLANT COMMISSIONING

CORRECT PROOF OF THE OPERATIONAL STARTING DATE OF A PLANT

An installation shall be considered to be in operation **once the physical production** of biogas consumed in the transport sector, and the physical production of heating and cooling and electricity from biomass fuels has started.

A formal record is required from the relevant TSO/DSO* on which, the date of the physical connection and the injection of biomethane or electricity into the respective grids is included, and or the injection off-grid, or through isolated local distribution networks of BioNGV or BioLNG

**Transmission system operators (TSO) and distribution network operators (DSO)*

ANY QUESTIONS ?

Please, submit your questions via the Q&A button!

THE BIOGAS CHAIN

ALL OPERATORS

CHECKLIST

Goal: to simplify the implementation of 2BS Standards

The checklists have been updated to facilitate your understanding. Each indicator has been summarized by **key words.** You can also filter indicators by type of raw material (for STD-01) or by sector (for STD-02).

These checklists have also been communicated to auditors so that you have the same basis of understanding.You can find them on 2BS website.

2BS - Mandatory Checklist for the audit of First gathering point (agricultural biomass and wastes and residues) — version **0.3** 29/08/2023

Please refer to 2BS-STD-01 for more details

Requirement						Verification Guidance							Findings I if nonconformity state clearly the evidence, the requirement and the failure I if conform, identify the evidence (records)	Conformity		
Reference	Requirement	Criticality level				Verifier to control	Scope		Reference documents			Instruction to complete the verifier		No	Yes	NA
		C	M	m			Agricultural biomass	Wastes and residues	PRO-03 (GHG emissions)	PRO-04 (waste & residues)	PR... (bi					
Requirements for internal management and monitoring system																
Criterion 0.1 : Origin of the biomass	**STD-01 0.1.1**	**Evidences (data/records) for biomass (raw materials) suppliers** to demonstrate compliance with RED II and sustainability.			x	List of official data, documents, land registry and/or records, or	x		x		x					
						List of crops and cultivated areas	x				x					
						List of points of origin		x		x	x					
						List of official documents currently in use	x	x		x	x					
	STD-01 0.1.2	**List of all its biomass suppliers** claiming sustainability with the approximate localization of the production area and points of origin.		x		List of suppliers with - for each supplier - the name, address, and main characteristics (location, type of feedstock cultivated, area of certification, type of material, estimated amount of sustainable material that can be harvested annually, etc.) or	x				x	These lists shall be reviewed and updated at least once a year or when a new supplier is added.				
						List of suppliers with - for each supplier - the geographical location of the production area with, for example, the geographical coordinate as a reference	x				x					
						List of points of origin with - for each - the geographical location, associated processes and estimated material that could be collected annually per point of origin		x		x	x					
	STD-01 0.1.3	Annual signed document (ex **self-declaration**) from biomass suppliers, confirming their commitment to producing sustainable biomass in accordance with EU Directives.			x	Self-declarations fulfilled, dated, and signed	x	x		x	x					
						Contract with appropriate sustainablity clause	x	x		x	x					
						Amendment to an existing contract	x	x		x	x					
						Other questionnaire or form used during site visits by first gathering point	x	x		x	x					
	STD-01 0.1.4	**Origin and country of origin** of the biomass through the suppliers' declarations.			x	Location of the suppliers of biomass, country of origin, NUTS 2 region, or	x				x					
						Land registry document, or	x				x					
						GPS chart, or	x	x		x	x					
						Access to the Reference Map of Agricultural Plots.	x				x					
						Access to the contracts, addresses, contacts of each point of origin, including the date and transport records from the point of origin up to the collection point		x		x	x					

UNION DATABASE (UDB)

Deployment of the Database

OBJECTIVE

Ensure transparency and traceability of renewable fuels.

WHICH FUELS MUST BE REGISTERED IN THE DATABASE?

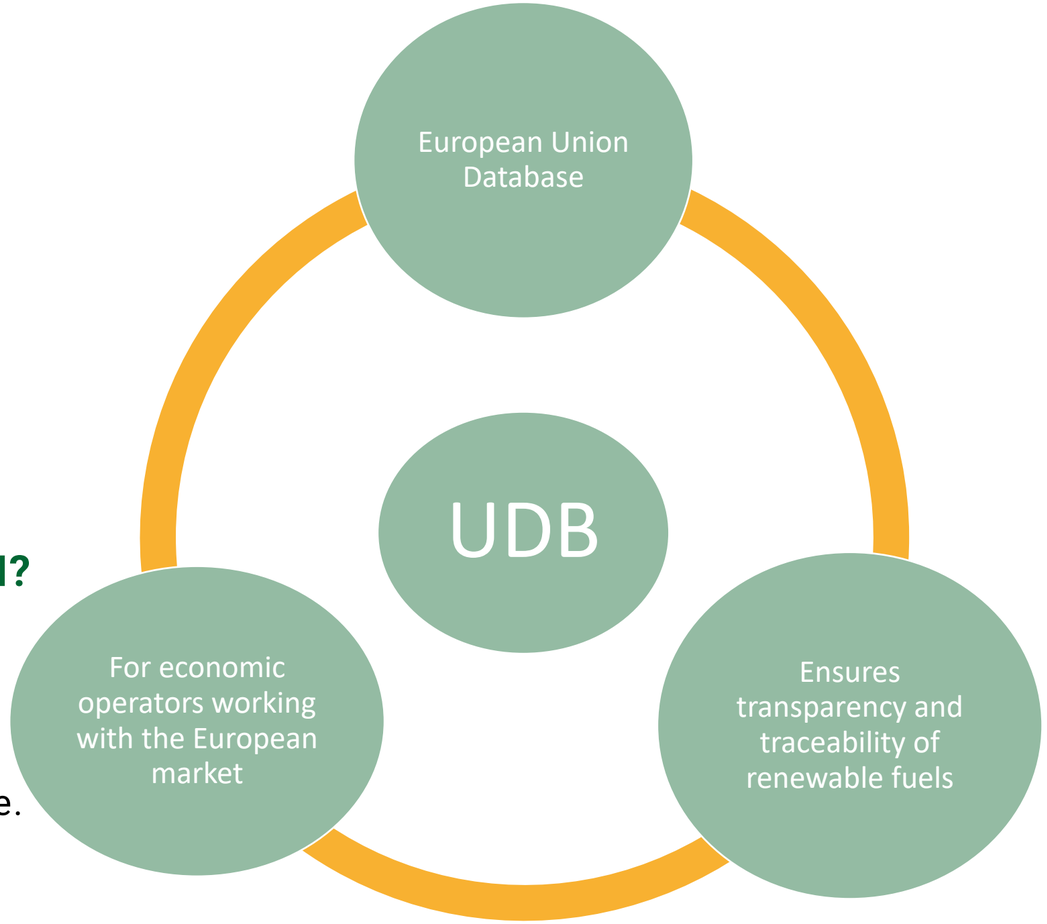
Biofuels, bioliquids and biogas for transport use.

WHAT ABOUT INJECTED BIOMETHANE, WHOSE USAGE IS UNKNOWN?

We are currently discussing this issue.

WHICH OPERATORS MUST BE REGISTERED IN THE DATABASE?

Voluntary schemes must register the biogas producers concerned by this database.



WHAT INFORMATION IS REQUIRED?

Information on tonnage transacted with sustainability characteristics including GHG emissions.

WHEN WILL IT BE OPERATIONAL?

The database will be deployed on 01/01/2024.

Link to our web page with full explanations : https://www.2bsvs.org/union-database.html

Link to the wiki provided by the European Commission : https://wikis.ec.europa.eu/display/UDBBIS/Union+Database+for+Biofuels+-+Public+wiki

Next steps

You can access all official 2BS documents, on our website: click here.

→ Please bear in mind that minor modifications are expected as 2BS updates its Standards and Procedures, as they are still in the approval process with the European Commission. As soon as we have the final documents, our website will be updated.

OUR TRAINING OFFERS

coming soon

Webinar 2BS Mapping Tool
Optimize your certification process!

Coming soon for auditors and customers:
Training on Greenhouse Gas emissions Actual values & others!

All training sessions can be organized in English and in French.

Each session is adapted to the participants' time zone.

ANY QUESTIONS ?

Please, submit your questions via the Q&A button!

Ilyana Cassam-Chenai

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