SUSTAINABILITY CERTIFICATION

SUSTAINABLE BIOGAS

-

This white paper presents the basics of 2BS sustainability certification for biogas sites to simplify and facilitate the certification process.

2BS
SUSTAINABILITY CERTIFICATION

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White paper on sustainability certification of biogas sites

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RED III

WHAT IS THE RED III?

The revised Renewable Energy Directive EU/2018/2001(RED III), is the Directive published by the European Commission on 2023. The RED aims to promote energy from renewable sources.

The RED also defines what constitutes an eligible sustainable raw material and a sustainable product.

WHAT IS ITS PURPOSE?

The European Commission aims to promote energy produced from renewable sources and thus facilitate the reduction of greenhouse gas (GHG) emissions in European countries.

42.5%

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

WHAT IS THE IMPACT FOR BIOGAS PRODUCERS?

Under RED III, biogas production sites with a capacity of 2 MW or more must, in accordance with transposition by the Member State, be certified and meet sustainability criteria as well as greenhouse gas emission reduction requirements.

The same obligation applies to plants with an average production rate in excess of 200 m³ methane equivalent per hour (measured at 0°C and 1 bar), calculated in proportion to the methane content when the biogas is a mixture of methane and other non-combustible gases.

Biogas plants with a capacity of 10 MW or more must comply with different GHG emission reduction criteria, depending on the date of commissioning (see diagram p.16). The same applies to plants with an output of less than 10 MW.

Installations with a capacity of less than 2 MW are not covered by the RED III requirements.

These requirements are defined by the RED directive. Member States are free to reinforce these criteria (please refer to national legislation). Those already certified are required to comply with RED III requirements.

HOW TO GET CERTIFIED AS SUSTAINABLE?

Simply approach a Voluntary Scheme, such as 2BS. Once contracted with the Voluntary Scheme and a recognized Certification Body, you can plan the initial audit of the site.

Please note: the preparation of the certification process can take up to 6 months, considering the time to gather documentation and production data from the site. However, once certified, the **2BS certification is valid for 5 years**, under the condition that follow-up audits are performed annually.

*Source: Site European Commission's website.

2BSVS CERTIFICATION

2BSvs SUSTAINABILITY CERTIFICATION

The 2BS association has developed the 2BSvs certification, based on the RED III 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.
The 2BSvs - biogas certification system covers the whole chain: from biomass production to feedstock collection to transformation and production of the final product (biogas & biomethane), depending on its use (heat, electricity or transport).
The 2BS certification is valid for 5 years, on the condition that annual audits are organized. In summary, 2BS offers sustainability certification and works with accredited certification bodies trained by our team to perform accreditation audits.

RECOGNIZED BY THE EUROPEAN COMMISSION

The 2BSvs guidelines meet the Renewable Energy Directive (RED II). Our sustainability certification is recognized by the European Commission and allows the commercialization of products under the "sustainable" label.
The 2BS certificate is equivalent and opposable to all Voluntary Schemes recognized by the European Commission.

APPLICABLE FOR ALL USAGES OF BIOGAS

The 2BSvs certification covers the whole chain of transformation / production, commercialization and distribution of biogas, and also includes the processes and traceability according to its usage: transport and mobility, heat or electricity production.

WHAT IS ITS PURPOSE?

ENSURE THE PRODUCTION OF RENEWABLE ENERGY

Our role as a Voluntary Scheme recognized by the European Commission is to ensure that energy production is virtuously and environmentally friendly. Being able to follow the traceability of the entire biofuel, bioliquid and biogas chain is therefore essential.

JUSTIFY THE ALLOCATION OF STATE SUBVENTIONS

The European Commission, via the RED, also seeks to ensure that the Member States' subventions are allocated in a responsible manner and only to environmentally friendly sites. Thus, sustainability certification also addresses this need.

TRANSLATE REGULATORY DIRECTIVES

2BS is a Voluntary Scheme based in France, with an international scope. We have adapted our guidelines to agricultural practices in partnership with institutions as France Gaz Renouvelables (FGR) and AAMF.
Our guidelines not only meet the regulatory requirements but also the reality on the ground.

2BSvs CERTIFICATION

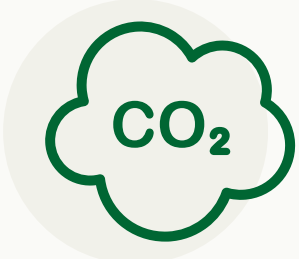
SUSTAINABILITY DEMONSTRATION

The 2BSvs sustainability certification is based on two main criteria. These criteria correspond to the European Directive requirements for biogas sustainability verification.

THE TWO ASPECTS OF SUSTAINABILITY DEMONSTRATION

SOIL AND RAW MATERIALS SUSTAINABILITY

Feedstocks include waste and residues, plant material or livestock effluent.
The material entering a methanizer must come from sustainable parcels. It cannot come from soils with a high biodiversity potential or from deforested lands, for example.
The waste and residues must respect the principles of the circular economy and meet the definition of waste defined in the Directive.

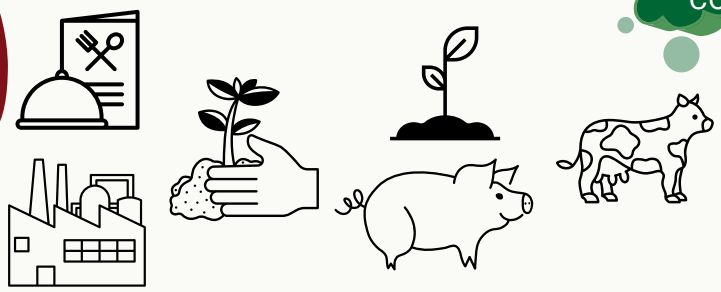


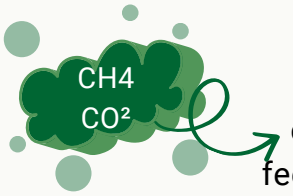
GREENHOUSE GAS EMISSIONS

In order to encourage the reduction of Greenhouse Gas (GHG) emissions, biogas must be more virtuous than fossil reference. Thus, producing 1MWh of biomethane would have a lower emission than 1MWh of fossil energy.
To demonstrate this, biogas producers and traders calculate the total emission in g(CO2) / MWh of the injected biomethane. Note: the required GHG emission reduction threshold is calculated according to the usage and the date of operation of the installations. See the diagram on page 16.
More details on the calculation of GHG emissions on page 8!

THE CERTIFICATION DIAGRAM

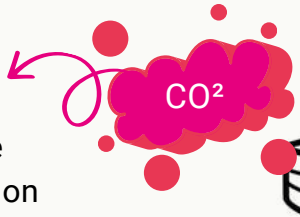
1. Land and raw materials sustainability and eligibility must be demonstrated.

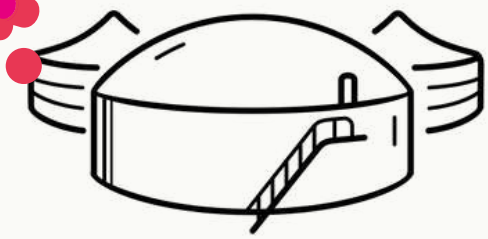




Emissions calculated by feedstock and by emission factor.

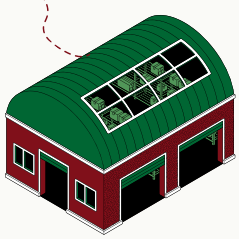
Emissions calculated regarding the biogas production site-specific processes.

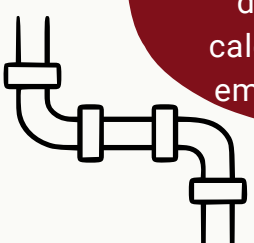




2. Thanks to the traceability of the site and its suppliers, the total emission of the final product's Greenhouse Gases must be calculated via a dedicated platform. In this calculation, direct and indirect emissions must be taken into account.

PS: any activity along the production chain that prevents the release of CH4 into the atmosphere is valued when calculating the total greenhouse gas emissions of the final product. Example: use of livestock effluent as input and valorization of digestate.





MASS BALANCE AND GHG EMISSIONS CALCULATION

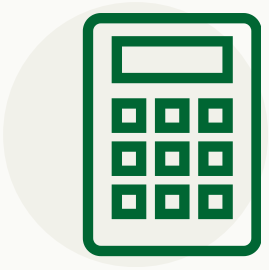
MASS BALANCE

WHAT IS IT?

The mass balance is a control method. It allows raw materials with different sustainability and greenhouse gas emission reduction characteristics to be mixed during production processes. Traceability of all f must be rigorous and the operator must be able to demonstrate the link between what goes in and what comes out. In other words, the certified biomethane that will be injected into the network must be consistent with the volume of sustainable feedstock entering the methanizer.

Thus, the collection and transformation of mass balances must be consistent: the mass balance system must include information on sustainability, greenhouse gas emissions, and the quantities of sustainable and non-sustainable feedstocks entering a methanizer.

GREENHOUSE GAS EMISSIONS CALCULATION



HOW DOES IT WORK?

The reduction of Greenhouse Gas emissions must reach the required threshold depending on the usage and date of operation of the facilities (see diagram on page 16). The calculation can be done through web platforms. Customers are invited to contact 2BS to recognize the tool used to calculate greenhouse gas emissions.

All commercialized "sustainable" biogas and biomethane must be accompanied by their Proof of Sustainability (PoS - see example on page 17), where the reduction of GHG emissions must be indicated.

REQUIRED DOCUMENTATION

LIST OF DOCUMENTS

Below, you may find a non-exhaustive list of examples of the documentation needed to successfully complete your 2BSvs - biogas sustainability certification!

BIOMASS COLLECTION

- List of all certified feedstock suppliers and copies of their valid certificates, if the biomass is certified by a third party
- Annual self-declarations/updates of all farmers supplying the biogas plant
- The list of farms and CAP declaration file per farm (linked to the self-declarations), their geographical location (maps), extension (ha), status (in production/not in production), type of biomass
- Sustainability report for each exploitation (sustainable, conditionally sustainable and non-sustainable)
- Record of GHG emissions calculation (gCO2eq/kg dry MP) for each farm:
  - related to the extraction and cultivation of each crop type (eec).
  - related to possible bonuses associated with good agricultural practices (esca)
- Annual internal audit reports for all raw material farmers; consolidation of data including sustainability of surfaces and characteristics of collected products (tonnage, cultivation area, and verification of associated GHG calculations)
- Mass balance (12 months - agricultural biomass collection activity / 3 months - waste and residue collection activity), supply, organization and management of stocks on site (traceability of characteristics, sustainability and GHG emissions, conversion factors and management of batch traceability).
- Mass balance (3 months - trading activity) for purchasing from already certified suppliers
- Purchase documents for the upstream part (farmers and/or certified operators): purchase orders, contracts, invoices and inspections of goods receipts, delivery notes and quantities received as well as sales documents (shipping notes, quantities, invoices, sustainability characteristics, greenhouse gas balance, etc.)
- Transfer document between collection mass balance and process mass balance
- Specific instructions from the local / regional authorities which frame the methanization activity

WASTE AND RESIDUES COLLECTION

- List of all points of origin (type of process), their geographical location, distance from the collection point (GHG emissions associated with transport), monthly tonnage and type of substance/material (co-product, waste or residue)
- List of self-declarations from each point of origin with the necessary additional information provided by the points of origin in order to know - the status of the substance (co-product, waste or residue)
  - The status of the substance (co-product, industrial residue or waste)
  - If co-product (GHG emissions and proof of sustainability)
  - If not referenced in Annex IX (RED II) or Annex IV (RE), the decision tree

(no on-site audit of points of origin for the biogas sector)

- Mass balance (3 months), supply, organization and management of the stock on site, conversion factors and management of the traceability of the batches: GHG emissions associated with transport, and sustainability characteristics (agricultural residues)

EXECUTION OF THE MASS BALANCE - PROCESS

For a 3-months period:

- Record of all inputs put in the digester (name of inputs, BMP, date of incorporation, quantities incorporated) with their characteristics of durability and GHG emissions according to the status of the input (product, co-product or waste & residue)
- Record of digestate produced, stored (storage modalities)
- Record of biogas and/or biomethane production
- Record of leaks, off-gas, unannounced shutdowns
- SOP associated with each batch

All this information must be recorded in a calculator.

CALCULATION OF THE GREENHOUSE GAS EMISSIONS REDUCTION

Spreadsheet/calculator, showing:

- GHG emissions
- emissions reduction compared to the fossil fuel reference adapted to the fuel's usage and to the date of the installation's operation

I AM READY FOR THE CERTIFICATION PROCESS...

HOW TO BE CERTIFIED?

Now that you are familiar with 2BS sustainability certification, you can find below how to get certified!

1. I choose to apply for the 2BSvs sustainability certification.
2. I contract with a Certification Body referenced by 2BS on our website: https://www.2bsvs.org/certification-bodies.html
3. I register in 2BS by completing this registration form https://www.2bsvs.org/registration.html and I pay my 2BS fee.
4. I prepare the audit file with all the necessary documentation (see pages 9 and 10).
5. If necessary, I organize a blank audit.
6. I am audited and can obtain my certificate after validation by the Certification Body.

AFTER THE AUDIT

After the accreditation audit, you have some commitments to fulfill!

GUARANTEE THE GOOD DATA TRACEABILITY

Continuing to make quarterly mass balances is fundamental to ensure traceability within the chain.
For biogas used in the transport sector, the usage of the European Commission's database is also mandatory (see the 2BS page regarding the Union Database).

DECLARE THE POS

From the mass balances, complete the PoS (Proof of Sustainability) that must accompany your products.

PLAN YOUR ANNUAL AUDITS

Every year, in order to continue using your 2BSvs sustainability certification, you must perform audits on the anniversary of the first audit (+/- two months).

OUR ASSOCIATION

2BS supports fuel and biomass producers and traders in their sustainability certification. For over 10 years, 2BS has been valuing virtuous agricultural approaches and developing technical know-how in partnership with experts from the agricultural world. We propose guidelines that are easy to implement.
2BS certification is recognized by the European Commission.

RECOGNIZED BY THE EUROPEAN COMMISSION

Our guidelines meet the Renewable Energy Directive (RED II), and our sustainability certifications are recognized by the European Commission.

OUR DNA

Continuous evolution is in our DNA. This is why we work hand in hand with experts from the agricultural world to develop specifications that meet not only regulatory requirements but also the reality of the field.

CONTACT US

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SUSTAINABILITY CERTIFICATION

APPENDICES

2BS
SUSTAINABILITY CERTIFICATION

CONCEPTS OF THE CERTIFICATION

WHAT DOES IT MEAN?

MASS BALANCE

It is a control method that allows the storage and usage of raw materials with different qualities of durability, emission of greenhouse gases, etc.

WASTE AND RESIDUES

Any substance or material left over from a production, transformation or process that is to be abandoned.

LIVESTOCK EFFLUENTS

The result of mixing animal manure with its litter (e.g. straw, sawdust, wood chips, etc.). Livestock effluents can be in the form of slurry or manure. In both cases, the effluent can be handled and stored.

MANURE

Manure is a more or less fermented mixture of bedding and animal waste, used as an organic amendment and fertilizer.

FEEDSTOCK

Any raw material entering a methanizer for the production of biogas.

SLURRY

A mixture, in liquid form, of excrement and urine from cattle, pigs and sheep, with some forage debris and little or no bedding.

ORGANIC MATERIALS

Organic materials such as crop residues, silo and grain waste, fruit and vegetable waste, etc.

PoS - PROOF OF SUSTAINABILITY

Proof of sustainability where the percentage of greenhouse gas emission reduction for each usage is displayed.

BIOMETHANE BATCH

A batch corresponds to a quantity of biomethane injected into a natural gas network, marketed or consumed between a start date and an end date. A batch of biomethane can be produced from several inputs.

DIAGRAMS

WHO NEEDS TO BE CERTIFIED

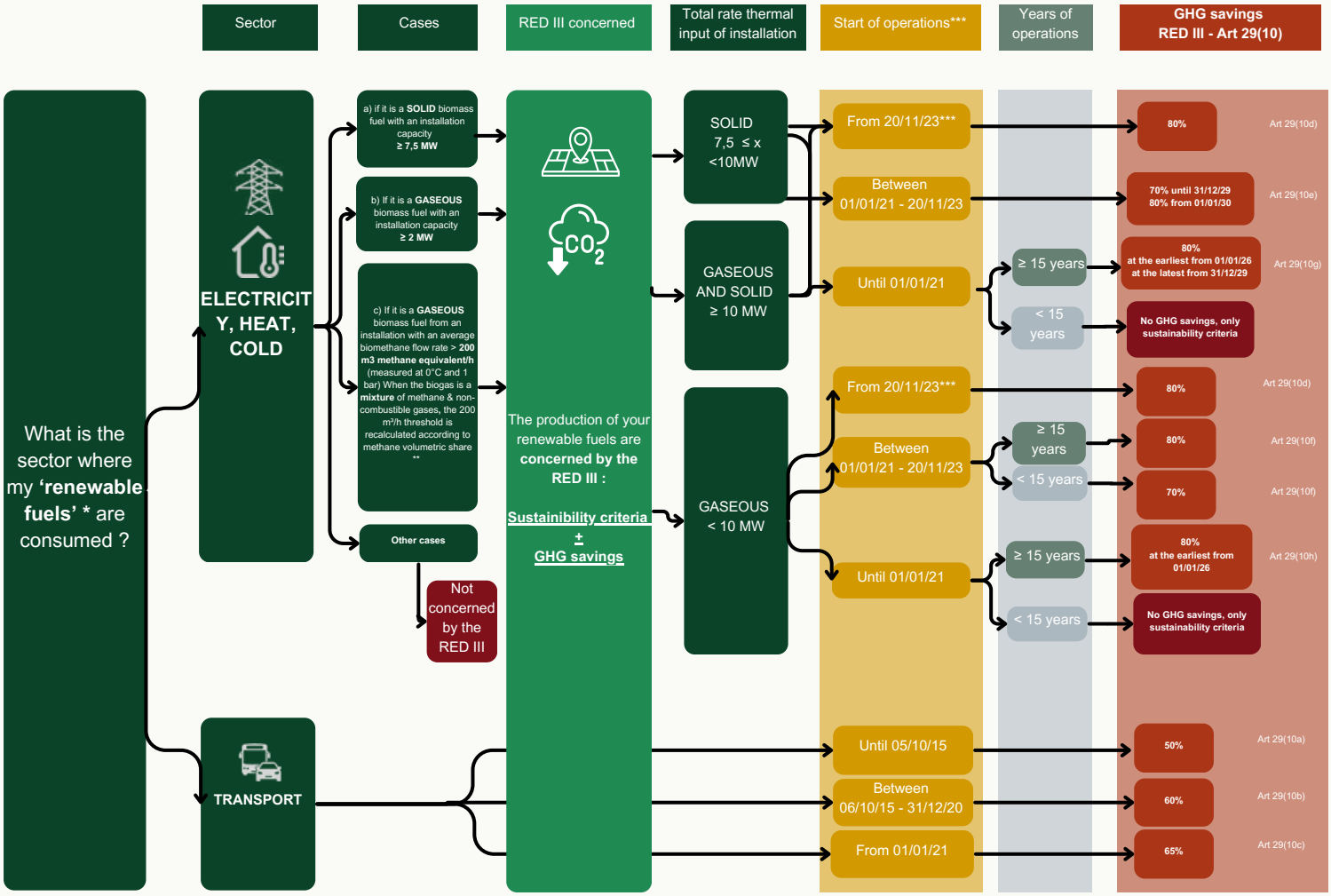

Figure 1: Scope of the RED III requirements and minimum greenhouse gas savings compared to those resulting from the use of biomass fuels in the transport sector and for electricity, heating, and cooling production a

**biofuels, bioliquids, biomass fuels and renewable fuels of non-biological origin;*

*** In the case of installations producing gaseous biomass fuels with the following average biomethane flow rate:*

(i) above 200 m3 methane equivalent/h measured at standard conditions of temperature and pressure, namely 0 °C and 1 bar atmospheric pressure;

(ii) if biogas is composed of a mixture of methane and non-combustible other gas, for the methane flowrate, the threshold set out in point (i), recalculated proportionally to the volumetric share of methane in the mixture.

*******Until 31/12/2030****, the sustainability and GHG emissions saving criteria set out in Article 29 in its version in force on 29/09/2020 apply,* ***only if*** *support was granted before 20/11/2023 and that support was granted in the form of a long-term support for which a fixed amount has been determined at the start of the support period and provided that a correction mechanism to ensure the absence of overcompensation is in place.*

POS

PROOF OF SUSTAINABILITY - POS

The rules of each country apply.

The proof of sustainability required by local regulators is provided by each country's authorities.

SUSTAINABILITY CERTIFICATION

CONTACT US

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