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K-Ö

# Infosheet for SUSTAINABILITY OF BIOFUELS, BIOLIQUIDS and BIOMASS FUELS

## Greenhouse gas savings and calculation

## Requirements for Greenhouse gas emission savings

**No verifications of greenhouse gas emission savings are carried out under the AACS scheme. These are only subsequently checked - at the level of the liquid or gaseous stage of biofuels, bioliquids and biomass fuels - by voluntary schemes recognised in accordance with Article 30(4) of Directive (EU) 2018/2001, only to the extent of the scope of their recognition.**

The greenhouse gas emission reduction achieved through the use of biofuels, bioliquids and biomass fuels compared to fossil fuels shall (laid down in Article 29(10) of Directive (EU) 2018/2001):

a) be at least 50 % for biofuels, biogas used in transport and bioliquids produced in installations operating on or before 5 October 2015; (b) be at least 60 % for biofuels, biogas used for transport and bioliquids produced in installations that have been in operation since 6 October 2015 until 31 December 2020;

b) be at least 65 % for biofuels, biogas used in the transport sector and bioliquids produced in installations that start operations on or after 1 January 2021;

c) for electricity, heating and cooling produced from biomass fuels, be at least 70 % in installations that start operations between 1 January 2021 and 31 December 2025 and at least 80 % in installations that start operations after 1 January 2026.

An installation shall be considered to be in operation once the physical production of fuel, heat or cooling, or electricity has started (i.e. once the production of fuels including biofuels, biogas or bioliquids, or production of heat, cooling or electricity from biomass fuels has started).

It is important to note that the information of GHG emissions and savings for final biofuels, bioliquids or biomass fuels are calculated and provided by the producer of the final product, including the GHG information for transport and distribution of the final product up to the final market/filling station. They must not be altered by any element of the supply chain after the final producer.

## Greenhouse gas calculation

Greenhouse gas emissions from the production and use of biofuels, bioliquids and biomass fuels shall be calculated in accordance with the instructions of Directive (EU) 2018/2001 Article 31 (1) to Article 31 (3), Annex V and Annex VI as well as in accordance with Commission Decision 2010/335/EU and Commission Communication 2010/C 160/02, Annex II and the Note on the conducting and verifying of actual calculations of the GHG emission saving.

### GHG emissions shall be reported using appropriate units. These are:

g CO2eq/dry-ton for raw materials and intermediary products
g CO2eq/MJ for final fuels

When default values are used, information on GHG emissions should only be reported for final fuels and can be reported as an aggregate. If relevant, both, the process technology and the raw material used need to be specified.

### METHODOLOGY:

$$E = e_{ec} + e_l + e_p + e_{td} + e_u - e_{sca} - e_{ccs} - e_{ccr}$$

E = total emissions from the production of the use of the biofuels, bioliquids and biomass fuels
$e_{ec}$ = emissions from the extraction or cultivation of feedstock;
$e_l$ = annualised emissions from carbon stock changes caused by land-use change;
$e_p$ = emissions from processing;
$e_{td}$ = emissions from transport and distribution;
$e_u$ = emissions from the biofuel, bioliquid, biomass fuel in use;
$e_{sca}$ = emission savings from soil carbon accumulation via improved agricultural management;
$e_{ccs}$ = emission savings from $CO_2$ capture and geological storage; and
$e_{ccr}$ = emission savings from $CO_2$ capture and replacement.

The formula elements $e_{sca}$, $e_{ccs}$ and $e_{ccr}$ according to Directive (EU) 2018/2001 Annex V and Annex VI can only be determined individually.

The GHG saving potential of biofuels, bioliquids and biomass fuels can be determined by the following methods according the Directive (EU) 2018/2001:

- where a **default value** (last interface) for greenhouse gas emissions saving for the production pathway is laid down in Part A or B of Annex V for biofuels and bioliquids and in Part A of Annex VI for biomass fuels where the el value for those biofuels or bioliquids calculated in accordance with point 7 of Part C of Annex V and for those biomass fuels calculated in accordance with point 7 of Part B of Annex VI is equal to or less than zero, by using that default value;

- by using an **actual value** calculated in accordance with the methodology laid down in Part C of Annex V for biofuels and bioliquids and in Part B of Annex VI for biomass fuels;

- by using a **value calculated as the sum of the factors** of the formulas referred to in point 1 of Part C of Annex V, where **disaggregated default values** in Part D or E of Annex V may be used for some factors, and actual values, calculated in accordance with the methodology laid down in Part C of Annex V, are used for all other factors;

- by using a **value calculated as the sum of the factors** of the formulas referred to in point 1 of Part B of Annex VI, where disaggregated default values in Part C of Annex VI may be used for some factors, and actual values, calculated in accordance with the methodology laid down in Part B of Annex VI, are used for all other factors.

For every phase in the production and supply chain, all relevant information like the use of disaggregated default values and/or all details used to determine the actual values (methodology, measurements, data sources for non-measured values) must be documented and provided to the auditor for verification in advance.

## 1. Use of default values

To demonstrate compliance with the GHG reduction target, companies can use the default value of Annex V of Directive (EU) 2018/2001 for the GHG reduction potential. This is possible if the production pathway is defined in Annex V of Directive (EU) 2018/2001 and if the GHG emissions due to carbon stock changes resulting from land use change (el value) are less than or equal to 0. If the European Commission updates the default values, these updates shall take effect immediately in the AACS system. If using the default value for the GHG emission saving it is necessary to provide proof of compliance with the greenhouse gas saving requirement if the production pathway is listed in Annex V, Part A and B and Annex VI, Part A and D of Directive (EU) 2018/2001 and if the GHG emissions resulting from carbon-stock changes caused by land-use change (el value) are less than or equal to “0”.

## 2. Use of disaggregated default values or the GHG values from the NUTS II report

Directive (EU) 2018/2001 provides disaggregated default values in accordance with Part D and E of Annex V and Part C of Annex VI as well as the RED II Corrigenda of 25. September 2020, which relate to part of production and can be used in combination with actual values to calculate the GHG emissions. These disaggregated default values can only be applied if the process technology and feedstock used for the production of the biofuel/bioliquid/biomass fuel match their description and scope. If the European Commission updates the default values, these updates shall take effect immediately in the AACS system.

It is also permissible to use regional GHG values for cultivation if a calculation has been carried out for the product with production pathway in the NUTS II report (see document: Info sheet for registered farmers) . The NUTS values refer to the diasaggregated default value cultivation and are to be used without the disaggregated default value transport and distribution only by the first purchaser. From the delivery by the first purchaser to a second purchaser, either an actual calculation of transport and distribution or the entire disaggregated defaultstandard value transport and distribution is to be indicated for this regional GHG value for cultivation.

In case NUTS II values are used, the respective federal state is to be indicated as the country of cultivation (NUTS2 region) (see Regulation (EC) No. 1059/2003).
The GHG value when using several federal states can be combined, as the highest value of the federal states concerned (e.g.: rape - from Lower Austria value 19.50; - from Upper Austria value 20.25 => highest value 20.25). A prerequisite for the use of a NUTS II value of another Member State is that the NUTS II value has been approved by a corresponding certification system, recognised by EC.

Link to the reports from the EU's member states:
https://energy.ec.europa.eu/system/files/2018-07/pre-iluc_directive_nuts2_report_values_mj_kg_july_2018_0.pdf

Note that there are no default emission values for the land use change (el) component. When using disaggregated default values for cultivation, GHG emissions based on land use change must always be added.

## 3. Use of actual calculated values

Auditing of actual values is not in the scope of AACS-scheme. Where actual GHG emissions calculations are used, the provisions of (draft) Commission Implementing Regulation on rules to verify sustainability and greenhouse gas emissions saving criteria and low indirect land-use change–risk criteria (in particular Art. 11 and 14) have to be observed by the economic operators.

## Imprint:

This information sheet contains legally non-binding statements. In the sense of the principle of equality, the statements apply equally to all genders.

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