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CONSULTATION RESPONSE

FuelsEurope consultation response
Renewable energy – revising biofuel, bioliquid and biomass fuel production pathway values and modifying methodology

Brussels, 26/01/2026:
FuelsEurope and its members welcome the opportunity to comment on the draft revision of Annex V and VI of the Directive (EU) 2018/2001 (Renewable Energy Directive). As producer of renewable and low carbon fuels, we are fully committed to support the correct and effective deployment of clear rules for calculating the greenhouse gas impact of such products.

To this end, we want to share this set of recommendations and requests for clarifications, crucial to ensure the correct application of the revised annexes.

Key recommendations:

1. **Recognition of fully renewable electricity**
2. **Maintain the reference to bio-ethers**
3. **Adjust the scope of e_{ccs}**
4. **Inclusion for carbon emissions that are permanently chemically bound in long-lasting products, captured in the production of biofuels, bioliquids or biomass fuels**
5. **Calculation of ep term when calculating bioliquids and biofuels greenhouse gas emissions. Period of calculation**
6. **Clarifications in Annex V tables**
7. **Clarification on the applicability of disaggregated default values to co-processed products**
8. **Clarify the use of default values when bunkering operations are performed 150km from the production plant**
9. **Clarify the scope of application and definition of the Cstor factor**
10. **Clarify the applicability and methodology to calculate the "methane leakage" improvement factor**
11. **Clarifying the paragraph on compression and liquefaction**
12. **Define "standard" and "best" practice for methane leakages**
13. **Clarify the applicability of default and typical values**

1. Recognition of fully renewable electricity

Unlike RFNBOs and RCFs under RED Delegated Acts (EU) 2023/1184 and 2023/1185, there is no option to assign zero GHG emissions to fully renewable electricity used in biofuel production, nor clear rules on how electricity qualifies as fully renewable. This creates a regulatory imbalance, disadvantaging biofuel producers and undermining equal treatment across renewable fuels under RED.

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Therefore, we ask the Commission to include in the revision of Annex V:

- Clear rules and conditions for classifying electricity used in biofuel, bioliquids and biomass fuel production as "fully renewable" and in particular,
    - a specific provision to consider that the emissions from the electricity taken from the grid would be calculated in the same was as indicated in Annex points 5 and 6 of regulation 2023/1185;
- Alternatively, the emissions of electricity can be zero-rated if the purchase of renewable power certificates/guarantees of origin (GOs) is demonstrated.

Moreover, it is essential that a single, transparent methodology for determining grid emission factors is applied to all renewable and low carbon fuels and that the values obtained for each Member State are periodically updated based on the latest data from Member States.

2. Maintain the reference to bio-ethers

It appears from the draft Annex V to the Delegated Directive that typical and default values of the greenhouse gas emissions savings for renewable fuel ethers ETBE, TAEE (part A) and bio-MTBE (part B) have been removed. Fuel ethers (ETBE, TAEE and bio-MTBE) are produced from bio-alcohol (ethanol and bio-methanol), transported, distributed and used across the world as high-quality and high-efficiency petrol components. They are blended with petrol due to their high-octane number and oxygen content, which improves the fuel combustion, supports fuel efficiency and decarbonizes transportation; their introduction in petrol has allowed, since 80's, the removal of lead additives.

We recommend the European Commission to maintain the references to bio-ethers with the corresponding mention "equal to that of the ethanol production pathway used" for ETBE and TAEE, as ethanol is incorporated, and "equal to that of the bio-methanol production pathway used" for bio-MTBE synthesized from bio-methanol. Maintaining bio-ethers in Annex V ensures consistency between the different Annexes of the Renewable Energy Directives (RED I, RED II but also RED III), in which ETBE, TAEE and bio-MTBE, are listed as biofuels, e.g. Annex III Energy content of fuels.

3. Adjusting the scope of e_{ccs}

In Annex V point 14, the formula detailing the calculation for emissions reduction from carbon capture and storage (e_{ccs}) includes: 'emissions from operations relating to the injection of CO2 into the permanent storage site (eCO2-i)'.

It should be clarified that the scope of this should be limited to the biofuel producer as CO2 storage is not covered under the RED certification framework. Therefore, any required information should be provided by the CO2 storage operator, and should be verified at the premise of biofuel producer, and hence exclude on-site visits of the CO2 storage site.

The text should further clarify that where an installation is ETS compliant (rather than voluntary), that the calculation should align with the ETS Monitoring and Reporting Regulation.

4. Inclusion for carbon emissions that are permanently chemically bound in long-lasting products, captured in the production of biofuels, bioliquids or biomass fuels

Carbon capture and utilization (CCU) is emerging as a key technology to improve net emission savings in industry.

Captured carbon can be permanently chemically bound in downstream products such as construction materials (as recognized in Delegated Regulation (EU) 2024/2620) or catalysts, creating strong incentives to capture emissions from biofuel and bioliquid production.

Some chemically binding processes deliver additional emission savings by continuing to absorb atmospheric CO_2 during curing, effectively acting as direct air capture.

CCU also supports the circular economy by allowing the utilization of ashes, drosses and by-products from steel and metal manufacturing, cement, mining, and waste treatment, which currently need to be disposed and follow an inertisation process. Its contribution to improved greenhouse gas performance is already formally recognised under recent EU delegated legislation.

The Delegated Regulation (EU) 2025/2359, which specifies a methodology for assessing greenhouse gas emissions savings from low-carbon fuels, already allows to account for permanently chemically bound carbon captures that improve the greenhouse emission balance of low-carbon fuels.

In light of these considerations, we recommend adding a provision to include in the calculation of the GHG impact of biofuels, bioliquids, and biomass fuels, carbon emissions that are permanently chemically bound in long-lasting products, captured in their production.

5. Calculation of e_p term when calculating bioliquids and biofuels greenhouse gas emissions.

In accounting for the consumption of hydrogen when producing bioliquids or biofuels, a more accurate and transparent methodology is needed, allowing flexibility for economic operators to reinforce competitiveness and market efficiency and growth.

We recommend maintaining the annual calculation of emissions associated with hydrogen consumption (based on the previous year), while introducing a provision that would allow biofuels and bioliquids producers, at their discretion, to alternatively use monthly averages to determine GHG emission values for each calendar year.

Additionally, we would recommend adding a calculation example, to clarify how fossil inputs emission should be accounted for in the Emission from processing (ep).
We also ask the Commission to clarify if, when fuel gas or natural gas are used as utilities, we should include in the E_p term the Carbon intensity (CI) of both production and combustion.
Similarly, we would appreciate further clarifications on the mention of "Chemicals or Products" in the scope of the term E_p, to understand if it implies that any chemical used in processing should include:

- its production CI, and subsequently:
- its combustion CI **even when the chemical is not actually combusted?**
- If yes for both previous points, **it overestimates actual emissions**.

6. Clarifications in Annex V tables

We spotted incongruences and points for clarifications in the updated tables for Annex V, specifically on the typical and default values used to calculate the GHG impact of biofuels and bioliquids:
In page 9, the value indicated as disaggregated default values for Hydrotreated oil (HO) do not add up to the total; the same applies for some other biofuel and bioliquid pathways.

As some previously existing Annex V part D tables have been combined, certain disaggregated default values have been deleted. These deleted values include disaggregated default values for soil N2O emissions only, for oil extraction only and for transport and distribution of final fuel only.

The existing disaggregated default values are important and used by many operators and we ask not to delete them in the tables.

7. Clarification on the applicability of disaggregated default values to co-processed products

It is not entirely logical that RED includes disaggregated default values only for final HVO products, which cannot be used for co-processed products. This creates an unnecessary limitation in the GHG calculation, as feedstock suppliers very often use disaggregated default values (for example for UCOME or for animal fat).

If the emission intensity of co-processing differs significantly from the final HVO disaggregated default values, we propose establishing new disaggregated default values for co-processed products.

If the emission intensity of co-processing is similar to the final HVO disaggregated default values, we propose allowing the use of the current disaggregated default values for co-processed products.

8. Clarifying the use of default values when bunkering operations are performed 150km from the production plant

The proposed text in the updated Annex V (Annex, to the Delegated Directive page 3, table A) suggests that actual values for transport emissions must be used for bunkering operations over 150 km from the production plant, rather than relying on defaults.

However, the proposed change in methodology seems to be only applicable to FAME biofuels as designated on the table, as there is no reference to the note "(**)" on other fuels. Additionally, without further clarification it is unclear whether this special provision applies only to fuels used for maritime transport, as it refers to bunkering, or to all renewable fuels.

We ask the Commission to clarify if this is the intention of the revised text.
More importantly, we would like to understand which methodology economic operators would be required to apply in order to derive the actual values, while highlighting how challenging it may be for an auditor to verify compliance with this requirement.

In addition to that, we ask to clarify if actual values would not apply for fuels transported for over 150 km with other means of transport other than bunkering.

9. Clarify the scope of application and definition of the Cstor factor

The correction factor reflecting the preservation of lower heating value of feedstock delivered at the gate (Cstor) has been added to the revision proposal of Annex VI.

It is unclear if this factor is applicable only to solid (woody) biomass fuels or to all types of biomass fuels, including biomethane. In case it should be applicable to biomethane, additional explanation and guidelines on how to calculate it in practice will be necessary.

We ask the Commission to clarify the definition of Cstor, its applicability, and the method that should be used by an operator to calculate its own Cstor factor.

10. Clarify the applicability and methodology to calculate the "methane leakage" improvement factor

In order to remove ambiguity and further define this newly added factor, we recommend the following adjustments:

- The table of improvement factors regarding best practice for the reduction of methane leakages (paragraph 15a. p. 28 of the ANNEX) should be described in greater detail.
- The "type" column should include or refer to specifications of how "best practice" is attained and if they can be stacked.
- The table in paragraph 15a uses the wording 'any technology', 'piping', 'maintenance' which can be interpreted in many different ways by the auditors and producers, undermining the level playing field in the application of the improvement factor.

We suggest that terminology is further defined to remove ambiguity.

11. Clarifying the paragraph on compression and liquefaction

The paragraph on compression and liquefaction emissions is extremely unclear and difficult to apply in practice.
It should be reworded to indicate that the new default value for compression emissions is considered 2.4g CO2eq./MJ while liquefaction emissions in the EU (whether at an LNG terminal or on-site or grid-connected liquefier) should be defined based on the 'actual' (calculated) values related to the electricity consumption and the carbon intensity of national electricity grids, or the default value of 4.9g CO2eq./MJ.

Member States transposing Annex VI into the national law or voluntary certification schemes applying the methodology, shall provide economic operators with the choice between using default or actually calculated values.

Furthermore, economic operators shall, via an update of Annex V & VI Part C (11), be able to reduce the carbon intensity of liquefaction via procurement of fully renewable electricity that is certified with guarantees of origin (GOs) or renewable PPAs that are attributed zero lifecycle emissions. This will have an overall positive impact on the energy transition

12. Defining "standard" and "best" practice for methane leakages

The amendment to Annex VI updates the emissions formula by introducing $E_{me.i}$, an improvement factor methane emission reduction.

This could be particularly relevant for biogas production by methanization, given its link to methane leakage management. and the European Commission's intention to implement new practices distinguishing "standard practice" and "best practice."

However, the criteria defining these practices are not specified in the proposed modification of Annex VI. These criteria could be set by voluntary schemes in their guidance documents, and approval by the Commission would ensure fair competition conditions between Member States.

We ask the Commission to clarify how the criteria to identify "standard" and "best" practice will be defined.

13. Clarify the applicability of default and typical values

It is not clear whether the new default and typical values for biomethane are applicable exclusively in cases where the biomethane production process is fuelled by own biogas and biomethane (we refer to this

asterisk in the respective tables "(*) all settings assume that process energy is supplied from own biogas/biomethane production. Other practices should be calculated with actual values").

This will cause unintended negative impacts on the business case of biomethane by limiting the volumes that can be injected into the gas grid.

The above asterisked note is understandable in the context of using only default values for the e_p factor, as permitted by the Commission. However, other emission factors—such as e_{ec} and e_{td}—are independent of how the required heat and electricity are produced within the technology. Therefore, it is unclear why their default or typical values should not also be used.

It is particularly important that this option remains available because otherwise it would impose an unnecessary additional burden on biomethane producers.

14. Additional clarifications

We would like to flag the following points which may require further clarification or correction:

- The wording "solid or gaseous biomass" has been added to fuel production, which falls under the scope of Annex VI, while Annex V covers "biofuels and bioliquids";
- the rationale against which the following specification was added as necessary in the revision of point 3(a) of Annex V is unclear: "For the purpose of Article 27(1), point (a), greenhouse gas emissions savings from biofuels are calculated in absolute terms, i.e., by deducting EB from EF(t).";
- Some of the terms used in Annex V differ from the rest of RED:
    - The differing acronyms include 'HVO' and 'HO' and 'waste cooking oil' and 'used cooking oil'; the acronym 'HO' has been added to the revised Annex V versions but it has not been defined or used elsewhere in RED, while 'HVO' is used in the current Annex V version. We propose to use either of the terms throughout RED.
    - The term 'waste cooking oil' is used in Annex V but instead 'used cooking oil' is used in Annex IX. We propose that the term 'waste cooking oil' be replaced by the term 'used cooking oil' in Annex V.
- Liquid biofuels are produced from a wide range of feedstocks. The revised Annex V draft provides a limited set of default values for a limited range of feedstocks. The revision should include a more comprehensive and robust set of feedstocks and associated default values, and could benefit from naming specific feedstocks as done previously.
- What is the rationale for using AR5 GWP values rather than those from AR6 (2021)? Is this decision linked to ensuring alignment with the 2020 regulation that was established before AR6?
- Page 12-part A title should be clarified, as it is potentially misleading, given that section A.3 also covers biomethane for use as a transport fuel.
- The Commission should clarify how an operator should prove that "the site does not repeatedly leak", within the term e_{ccs}.
- Clarify the eligibility of carbon sequestration technologies beyond geological storage under E_{ccs}.
- Confirmation required that the fossil fuel comparator (94 g CO2eq/MJ) adjusts the70% GHG reduction threshold for biomethane used for heat from 24 gCO_2eq/MJ to 28.2 gCO_2eq/MJ.
- The definition of 'biowaste' is missing and shall be provided for the sake of regulatory transparency and certainty. The definition should include a description with characteristics for which the biomass must meet to qualify for this category.

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FuelsEurope, the voice of the European fuel manufacturing industry. FuelsEurope represents, within the EU institutions, the interest of 39 companies manufacturing and distributing conventional and renewable fuels and products for mobility, energy & feedstocks for industrial value chains in the EU.

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