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Reply to the Public Consultation revising biofuel, bioliquid and biomass fuel production pathway values and modifying methodology

Bioenergy Association of Finland welcomes the opportunity to provide feedback on the proposed revision of the Greenhouse Gas (GHG) emission saving methodology under Annex V and VI of the Renewable Energy Directive (REDIII).

We consider that update the framework, for instance including previously missing segments such as the accounting of permanent carbon storage (BECCS) and default values for Fischer-Tropsch is valuable,

We would like to raise here critical issues in the proposed methodology that require urgent clarification and adjustment.

Sustainable bioenergy is a core pillar of the EU's climate mitigation efforts and makes a significant contribution to European security of supply, providing almost 11% of the EU's energy consumption. The proposed changes in Annex VI will directly affect solid biomass pathways in both existing and planned infrastructure and jeopardising the achievement of the EU 2040 and 2050 targets.

1. General remarks on revision timeframe

We question the necessity of revising the annexes at speed, considering REDIII is not yet fully implemented, and several Member States are late with its transposition.

Constant changes to requirements for bioenergy – while no requirements or scrutiny of fossil fuel supply chains are implemented – create a competitive disadvantage, have a negative impact on investment in bioenergy and put energy security at risk.

It is essential to establish sufficient time between the adoption of the revised methodology and its entry into force. The entry into force of the revised methodology should be set at the beginning of a calendar year rather than in the middle of it, to allow operators to adjust their reporting cycles.

2. Unjustified increases of disaggregated default values vs. typical values for forest biomass fuels supply chains

We observe a contradictory trend in the proposal: while the typical values of the disaggregated GHG emissions for solid biomass fuels pathways have generally been decreasing, the disaggregated default values for forest biomass fuels has increased by

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40%, rather than the 20% increase which was applied in the REDII Annex and re-iterated by the recently published JRC report.
This approach creates an artificially wide gap between typical and default values, penalising operators who rely on default values to demonstrate compliance. This undermines the stability of the overall regulatory framework and the credibility of the revision.

During the stakeholder call on 16 January 2026 the European Commission expressed the view that this increase is done on purpose and with the aim to discourage investments in bioenergy from forest biomass and favour agricultural biomass instead.

We consider that this approach is totally unacceptable in the context of a technical guidance. While we are fully aligned with the goal of increasing utilization of agricultural biomass, this should not be done at the expense of forest biomass. We do not consider that a technical annex in REDIII is the appropriate place to define policy regarding forest biomass utilization.

Instead of widening this gap, we recommend maintaining the 20% margin between typical and default values for emissions from processing, transport, and non-CO2 emissions from fuel use for all solid biomass pathways, that is already a feature of REDII. This will be aligned with the EU overall objective of reducing administrative burden especially for smaller operators.

The same disaggregated default and typical values for cultivation should be maintained, as was the case in REDII. This is consistent with Article 31.5 (a), which states that "In the case of an adaptation of, or addition to, the list of default values in Annexes V and VI: (a) where the contribution of a factor to overall emissions is small, where there is limited variation, or where the cost or difficulty of establishing actual values is high, the default values shall be typical of normal production processes". We consider that cultivation of biomass feedstocks fulfils all these requirements and therefore the conditions of keeping the same level of typical and default values.

3. Issues with the introduction of Moisture Content Reference Values in the legal text
The introduction of moisture content reference values (e.g. 30% for wood chips, 10% for wood pellets, 13% for agricultural residues) in certain parts of the revised directive (e.g. Annex VI, Table A.1 and Table A.2). is a new feature.
During the stakeholder call on 16 January 2026, the European Commission clarified that these moisture content reference values are *non-binding and provided for*

information purposes only. However, their placement in the tables is problematic as it could be interpreted as prescriptive by national authorities and auditors. Such an interpretation could mean that operators can no longer rely on the default values unless the moisture content of their supply chains meets exactly the reference values. This would trigger the need to constant recalculation, which obviously increases the administrative burden for operators.

To avoid this, we propose the adoption of one of two possible alternatives:
• Rather than a specific moisture content reference value, a range of moisture contents for which the default values can be applied could be listed, e.g. 30 – 45 % for wood chips. This moisture content range should be defined in consultation with the industry and reflect typical conditions of solid biomass fuels supply chains. A precedent for this already exists for transportation distances, for which the default values can be applied for a range rather than a specific value (e.g. < 500 km, between 500 – 2,500 km, etc.). It should also be clarified that if the actual moisture content is below the lower end of this prescribed range, then operators are allowed to use the default values of the Annex if those suit them. Recalculation or use of actual values would only be needed if the actual moisture content is higher than the upper end of the range. This way, we would expect meaningful reductions of the administrative burden for operators.
• Remove the moisture content reference values from the legal text and relocate them to the justification or explanatory part of the Directive. Alternatively, introduce a note explicitly stating: "The moisture content values shown are for information purposes only and reflect assumptions used to derive typical and default values. They do not constitute mandatory specifications for biomass fuels."

4. Issues with the introductory paragraphs before Tables A.1 and A2.
Newly introduced paragraphs before Tables A.1 and A.2 reference assumed conversion efficiencies of:
• 70% to heat and cold for biomass fuels from wood and woody biomass pathways if produced with no net-carbon emissions from land-use change.
• 65% to heat and cold for biomass fuels biomass fuels from agricultural pathways if produced with no net-carbon emissions from land-use change.
• 25% to electricity for both types of fuels.

During the stakeholder call on 16 January 2026, the European Commission clarified that these conversion efficiencies are non-binding and provided for information purposes only. However, the same risk as with the introduction of moisture content reference values applies: these conversion efficiencies could be interpreted as prescriptive (e.g. benchmarks or minimum performance requirements) by auditors and national authorities, even though they are not intended as such.

In order to avoid any risks resulting from such an interpretation, we propose to either remove the reference to the assumed conversion efficiencies and preserved lower heating value from the legal text and place them in the justification or explanatory section of the Directive, or, alternatively, introduce a clear disclaimer that these values only reflect assumptions used to derive typical and default values and that they do not constitute mandatory specifications for biomass fuels.

In addition, we strongly object to the unjustified lowering of the stated conversion efficiencies to heat from biomass fuels to levels below the industry standards. Conversion efficiencies to heat from biomass fuels are known to be high, typically exceeding 80%. The original JRC report from 2014 that first calculated the typical and default values for different biomass pathways assumed an 85% conversion efficiency to heat from solid biomass fuels. More recently, the technological assumptions used in the modelling for the EU 2040 targets assumed 82% conversion efficiency of biomass to heat in 2020, increasing to 90% from 2030 onwards. Therefore, we consider that for both wood and agricultural biomass pathways, any calculations and presented results concerning conversion efficiencies to heat should be set at a minimum level of 80%.

5. Reconsider the introduction of the Cstor factor for biomass storage

The proposed methodology foresees the introduction of a new Cstor factor, reflecting the preservation of lower heating value (LHV) of feedstock delivered at the gate. The impact of Cstor can be significant, increasing by 15% the GHG emissions of a wood biomass fuel pathway when there is no suitable storage facility, or keeping GHG emissions at the same level if conditions are good.

There are several concerning points regarding the introduction of a binary Cstor factor (either 100 or 115%). First and foremost, this is not elaborated in the recently published JRC report, therefore lacking a clear and robust methodological approach for its application. In particular, the selection of the 115% increase is not justified nor supported by any evidence.

Second, the design of the Cstor factor is methodologically unusual, since it effectively treats a loss of energy content as if it were an emission-producing activity. In practice, where storage losses occur, additional material must be processed, handled and transported to deliver the same amount of energy to the end-user. Actual-value lifecycle calculations already capture this effect through higher emissions from processing, transport and non-CO2 emissions from fuels used. Applying a fixed uplift on top of this therefore risks penalising the same phenomenon twice.

Third, no definitions or guidelines as what constitutes a "suitable storage facility" or what is the necessary information to be checked in a delivery log to confirm the balance between delivery and conversion of solid biomass fuel to energy. This ambiguity creates auditing challenges and could lead to confusion and misinterpretation during implementation.

Lastly, the proposed binary nature of the Cstor factor fails to take into account the cases where storage can improve rather than decrease the heating value of a fuel, i.e. when natural drying occurs in storage, and therefore lead to an improvement of the GHG performance of the value chain.

All in all, although we recognise good intent in the effort to ensure proper lifecycle accounting of biomass supply chains, we consider that the proposed approach for the Cstor factor fails to deliver on this. Storage is a necessary feature of main biomass supply chains and operators design and implement this with an aim to maintain and improve fuel quality and the value of their products, rather than the other way around. Considering all the above-mentioned issues, we urge the Commission to reconsider the introduction of such a factor.

6. Provide increased flexibility in using default values for a wider range of feedstock

The revised methodology correctly introduces certain revisions to provide greater flexibility in using default values for a wider range of feedstock in anaerobic digestion pathways (e.g. referencing "crop silage" rather than "maize silage" exclusively). However, we feel that such opportunities are not fully utilised for solid biomass pathways. This penalises operators that wish to use feedstocks that are not considered in the methodology and forces them to use actual values rather than default values. For this reason, we propose the introduction of relevant text or footnotes, as appropriate, to establish the use of default values for a wider range of feedstocks when functional similarities and similarities in expected performance of supply chains is expected. In particular:

- Default values for wood chips from forest residues should also be applicable to wood chips generated from landscape management, prunings or plantation removals of permanent crops (e.g. olives, vineyards, etc.), and any other productive woody formations other than short rotation cultures and stem wood.
- Default values for wood chips from wood industry residues should also be applicable to other similar processing residues, e.g. shred from compositing processes.
- Default values for straw pellets should also be applicable to pellets made from other types of herbaceous agricultural residues (e.g. maize residues among others).

In addition, the methodology should leave flexibility to Member States on how to interpret specific feedstocks sub-categories based on local conditions.

7.Coherence needed on the biofuels values and terminology

Some of the tables in Annex V have been combined which has resulted in some of the disaggregated default values (DDV) having been deleted compared to the current Annex V version (Part D). These deleted DDVs include DDVs for soil N2O emissions only, DDVs for oil extraction only and DDVs for transport and distribution of final fuel only. In general, simplifying the structure might have a good purpose, but the existing DDVs are important and used by many operators and we ask not to delete any DDVs in the tables.

The table in part D in revised Annex V seems to contain incorrect DDVs. The DDVs don't correspond to the sum of the default value and the default value is higher than the typical value for some pathways and these should be double checked. For example, for sugar cane 22,2+22,2+1,4 is not equal to 8,4 and this (wrong) default value is higher than the typical value.

Many of the default values are subject to special provisions such as "(**) When bunkering operations are performed over 150 km from the production plant, the additional greenhouse gas emissions for transport and distribution shall be accounted as actual values." For instance, 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. When considering the practical implementation of default GHG values in a voluntary scheme certification framework, it would be better for all stakeholders to avoid any unnecessary provisions with respect to the GHG default values.

8.BioLNG default values

The paragraphs related to bioLNG (Annex VI, Part III, A3, p.19) set a default value for liquefaction at 4.9 gCO_2eq/MJ. However, physical biomethane liquefaction projects and liquefaction-by-equivalence alternatives should have the possibility to demonstrate better environmental performance, and their decarbonisation efforts should be recognised by enabling deviation from the default value in all circumstances.

The paragraph should explicitly acknowledge that liquefaction by equivalence is a viable decarbonisation pathway, notably for LNG shipping and industrial users (including LNG trucking). An explicit clarification should be added that equivalence liquefaction carried out at interconnected EU terminals is eligible for the referenced default value or for the existing ISCC method, provided the biomethane complies with RED sustainability and GHG criteria.

The paragraph should clarify that 2.4 gCO_2eq/MJ shall be used as the compression emission default value, whereas 4.9 gCO_2eq/MJ shall be used as the default value for liquefaction. The current wording may be misleading and appear to refer to transport emissions.

Emissions after the production of biomethane should be accounted for by downstream economic operators (i.e., compression and liquefaction emissions).

The second part of the paragraph specifies that in cases where the liquefaction does not take place in the EU or is not powered by electricity, actual values should be calculated. However, the reference methodology for determining such actual values is not specified.

9. Co-digestion Flexibility

The current draft text still foresees the possibility to apply an averaging formula in the case of co-digestion. This risks penalising the biomethane business case. We support an approach that allows biomethane producers the flexibility to choose between the averaging methodology and a feedstock-specific calculation for the respective mass balance period.

This shift could be implemented either by:

1. Clarifying the interpretation of Annex VI(B)(1) so that “n feedstocks” refers to a defined mixture of n substrates composed of any feedstocks chosen by the producer, rather than implying the use of all feedstocks; or
2. Revising the formula in the RED Annex VI legal text.

10 Guidance on Using Actual Values for the $e_{me,i}$ Factor

Bioenergy Association of Finland welcomes the possibility to account for the improvement factor ($e_{me,i}$), which reflects reductions in methane emissions in the GHG footprint calculation (Point 15a in Part B, Annex VI). The understanding is that this factor can be deducted in the RED formula only if the default value is used.

If actual values are applied, the methodology for accounting methane leakages would be determined by every accountable certification scheme, likely creating market fragmentation, which therefore speaks for more precise guidance from the European Commission.

There also appears to be no clear indication of how improvements apply to typical values. Typical values include both “standard” and “best” values, with no instructions on moving from one to the other, which may represent an inconsistency.

11.Definition of Biowaste must be clear

Some of the terms used in Annex V differ from the rest of RED. To avoid confusion and possible misunderstandings with the GHG calculations we ask to harmonize the terms used in Annex V with the rest of the RED. The differing terms include ‘HVO’ and ‘HO’ and ‘waste cooking oil’ and ‘used cooking oil’: the term ‘HO’ has been added to the revised Annex V versions but it has not been defined or used elsewhere in RED. Instead the term ‘HVO’ is used in the current Annex V version. We propose to use either of the terms throughout RED. Also 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.

The current Annex VI draft lacks an explicit definition of biowaste, which creates a risk to regulatory transparency and certainty. We recommend including a definition aligned with the Renewable Energy Directive (Directive 2018/2001) and the Waste Framework Directive (Directive 2008/98/EC).

12. Applicability of Typical and Default Values

The wording at the end of tables containing typical and default values for biomethane appears to indicate that they apply only when the biomethane production process is fuelled by biogas/biomethane. This could have unintended negative impacts on the biomethane business case.

Bioenergy Association of Finland suggests that these values should be applicable to all biomethane producers, while ensuring that emissions from onsite energy use are properly included in the E_p factor.

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13. Distinguishing EU vs. Third-Country Production for the E_td Factor

The E_td factor should include different approaches depending on where the supply chain is located:

EU-based supply chains may choose between typical/default values and actual values. At the same time, third-country supply chains should use actual values to more accurately reflect GHG footprints for transport and distribution.

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