



Brussels, **XXX**
[...] (2025) **XXX** draft

COMMISSION DELEGATED DIRECTIVE (EU) .../...

of **XXX**

amending Annexes V and VI to Directive (EU) 2018/2001 of the European Parliament and of the Council, as regards rules for calculating the greenhouse gas impact of biofuels, bioliquids and biomass fuels and their fossil fuel comparators

This draft has not been adopted or endorsed by the European Commission. Any views expressed are the preliminary views of the Commission services and may not in any circumstances be regarded as stating an official position of the Commission.

EXPLANATORY MEMORANDUM

1. CONTEXT OF THE DELEGATED ACT

Sustainable biofuels, bioliquids and biomass fuels contribute substantially to the Union's renewable energy target. Article 29 of Directive (EU) 2018/2001¹ (the Directive) introduces sustainability and greenhouse gas (GHG) emissions saving criteria for biofuels, bioliquids and biomass fuels. If these criteria are not met, the energy from biofuels, bioliquids and biomass fuels cannot be taken into account for the purposes of the Union target, the Member States' renewable energy shares, or for measuring compliance with renewable energy obligations and the consumption of those fuels cannot be eligible for financial support.

Pursuant to Article 31(5) of the Directive, the Commission is required to review Annexes V and VI to that Directive and to adopt delegated acts to amend the values and the methodologies included in those Annexes. The Commission has contracted the Joint Research Centre (JRC) to provide technical assistance, in particular to review the GHG accounting methodologies and to review and update the values in Annexes V and VI. This Delegated Act will amend (i) the values in Part A and Part B of Annex V and Part A of Annex VI, (ii) the disaggregated values in Part D and Part E of Annex V and Part D of Annex VI, and (iii) the methodologies in Part C of Annex V and Part B of Annex VI.

Article 31(5) obliges the Commission to review Annexes V and VI with a view, where justified, to adding or revising values of GHG emissions for biofuel, bioliquid and biomass fuel production pathways. Those reviews must also consider modifying the methodology laid down in Part C of Annex V and in Part B of Annex VI. The Commission is empowered to adopt delegated acts pursuant to Article 35 to amend, where appropriate, Annexes V and VI by adding or revising the default values or modifying the methodology.

The typical and default GHG emission values currently valid under Annexes V and VI were calculated based on the input from stakeholders collected from 2011 to 2016, parameters valid during that time span and outdated references to the international rules on GHG emission accounting, such as the 2006 Intergovernmental Panel on Climate Change guidelines, which were refined in 2019. The Commission considers that there are grounds to add and revise GHG emission values for biofuel, bioliquid and biomass fuel production pathways, including the methodologies laid down in Part C of Annex V and Part B of Annex VI.

2. CONSULTATIONS PRIOR TO THE ADOPTION OF THE ACT

Neither an impact assessment nor an open public consultation was required for this proposal, which is of a technical nature, since they are usually required only for major initiatives.

The proposal is based on a study carried out by the JRC and draws on the results of several consultation exercises undertaken by the Commission, including *inter alia*, [xx] meetings of the expert group on renewable fuels and [to be added]

¹ Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources (OJ L 328, 21.12.2018, p. 82-209, ELI: <http://data.europa.eu/eli/dir/2018/2001/oj>), as amended by Directive (EU)2023/2413 of the European Parliament and of the Council of 18 October 2023 amending Directive (EU) 2018/2001, Regulation (EU) 2018/1999 and Directive 98/70/EC as regards the promotion of energy from renewable sources, and repealing Council Directive (EU) 2015/652 (OJ L, 2023/2413, 31.10.2023, ELI: <http://data.europa.eu/eli/dir/2023/2413/oj>).

The draft proposal was published for public feedback on the Better Regulation Portal from [...] to [...] 2025 [*wording on feedback and any follow-up to be included subsequently*].

3. LEGAL ELEMENTS OF THE DELEGATED ACT

The proposal is made pursuant to the second subparagraph of Article 31(5) of the Directive, which empowers the Commission to adopt delegated acts pursuant to Article 35 to amend Annexes V and VI by adding or revising the default values or modifying the methodology.



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THE EUROPEAN COMMISSION,

Having regard to Directive (EU) 2018/2001 of the European Parliament and of the Council of 11 December 2018 on the promotion of the use of energy from renewable sources², and in particular Article 31(5), second subparagraph thereof,

Whereas:

- (1) Sustainable biofuels, bioliquids and biomass fuels contribute significantly to the Union's renewable energy target. Article 29 of Directive (EU) 2018/2001 introduces sustainability and greenhouse gas emissions saving criteria for biofuels, bioliquids and biomass fuels. In accordance with Article 29(1), first subparagraph, of Directive (EU) 2018/2001, these criteria must be fulfilled for the energy produced from biofuels, bioliquids and biomass fuels to be taken into account as a contribution to the Union target and Member States' renewable energy shares, for the purposes of measuring compliance with renewable energy obligations and when assessing eligibility for financial support for the consumption of biofuels, bioliquids and biomass fuels.
- (2) The rules to verify compliance with the sustainability and greenhouse gas emissions saving criteria are set out in Article 30 of Directive (EU) 2018/2001. Annexes V and VI to Directive (EU) 2018/2001 set out methodological requirements that have to be complied with when measuring the greenhouse gas emissions savings of biofuels, bioliquids and biomass fuels.
- (3) The typical, default and disaggregated values for greenhouse gas emissions that are listed in Annexes V and VI to Directive (EU) 2018/2001 were calculated based on the parameters and input collected from stakeholders from 2011 to 2016. Annexes V and VI were also based on the 2006 Intergovernmental Panel on Climate Change guidelines. Those guidelines were refined in 2019, along with updates to the fifth assessment report on global warming potential³. Therefore, in view of the updated parameters and data related to the values included in Annexes V and VI to Directive (EU) 2018/2001, it is appropriate to amend the current greenhouse gas emission values for biofuel, bioliquid and biomass fuel production pathways. New elements such as biomass storage and quality, biomethane leakages, renewable energy system integration and novel pathways should be added to both Annexes V and VI, in a manner that does not impose additional costs or administrative burden on operators. In addition, the analysis of biomass pathways and related methodology to calculate the greenhouse gas emission values should be revised and updated with the latest available values.

² OJ L 328, 21.12.2018, p. 82.

³ The Fifth Assessment Report of the IPCC | UNFCCC

- (4) Annex V to Directive (EU) 2018/2001 should be amended to incorporate the updated environmental and technical parameters and to align with the current energy and climate policies of the Union, as detailed in the Joint Research Centre report that underpins the data used for the update of the Annexes. In particular, the default values related to biofuel production pathways depending on coal and using pure vegetable oil should be deleted from that Annex to align with the priorities of reducing the share of coal and shale gas in the Union energy mix and accelerating decarbonisation, as set out in the communication from the Commission of 11 December 2019 on the European Green Deal⁴. Pathways related to the transport distance of feedstock should be added to Annex V, where appropriate, following the approach taken in 2018 for Annex VI to Directive (EU) 2018/2001.
- (5) The total typical greenhouse gas emission values from biofuel production pathways consist of a cultivation, a processing and a transport section. The default greenhouse gas emission values are calculated by adding an increment to the typical greenhouse gas emission values to achieve more conservative estimates, accounting for the uncertainty related to potential underestimation of greenhouse gas emissions. Considering more recent and improved data for processing emissions, and with the aim of fostering the biofuel industry's competitiveness, without underestimating the greenhouse gas emissions from biofuel production, the typical and default values for biofuels should be amended.
- (6) Part B of Annex V to Directive (EU) 2018/2001 sets out typical and default values for future biofuels that were not commercially available, or were present only in negligible quantities, in 2016. The list of these biofuels should be updated by retaining only those production pathways and methods that are currently commercially available. In addition, biofuels with similar carbon intensities, such as Fischer-Tropsch based biofuels, should be consolidated into groups.
- (7) As regards the calculation of the greenhouse gas emissions savings from biofuels for the purposes of Article 27(1), point (a), of Directive (EU) 2018/2001, it should be clarified that those savings are calculated in absolute terms by deducting total emissions from the biofuel from the total emissions from the fossil fuel comparator for transport. In addition, guidance should be provided when it comes to the calculation of emissions from the processing of aviation fuels produced from biofuels suitable for road transport.
- (8) Where carbon emissions arising from biofuel and bioliquid production are permanently stored in geological storage sites, it is appropriate to allow the resulting emissions reductions to be credited to the biofuels or bioliquids as a reduction of greenhouse gas emissions. These credits should account for the capture rate of CO₂ and include any emissions from activities related to carbon capture, transport and injection into storage sites. This ensures a thorough and regulated approach to greenhouse gas emissions reduction, reflecting the full lifecycle of carbon management in biofuel and bioliquid production.
- (9) As regards Annex VI to Directive (EU) 2018/2001, the pathways for solid and gaseous biomass fuels should be updated on the basis of new input data on, for example, fossil inputs and fertilisers, and should aim to align with the fifth assessment report on global warming potential, following the approach taken for biofuels in Annex V to that Directive. New production pathways should be added

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Communication 'The European Green Deal', COM(2019) 640 final

to take into consideration the difference in transport emissions between feedstock imported over long distances and locally produced feedstock.

- (10) Solid biomass typical and default greenhouse gas emission values depend on the moisture content of the biomass used and the efficiency of the plant in which the biomass is converted into bioenergy, among other elements. Values should be updated to take those factors into account. In order to preserve the lower heating value of biomass, the formula to calculate greenhouse gas emissions from the production and use of biomass fuels before conversion into electricity, heating and cooling should be updated with the correction factor on solid biomass fuel storage after delivery to the plant gate. A new formula should be added to encourage the co-use of different types of solid biomass at the same plant.
- (11) Furthermore, it is essential that facilities using solid biomass fuels meet the greenhouse gas emissions thresholds. For that purpose, refurbishment of existing facilities with advanced technologies can enhance system efficiency to reduce the greenhouse gas emissions. This can involve introducing a range of energy efficiency improvements, such as producing extra heat, cooling or electricity from waste heat, changing feedstock or integrating non-combustion renewable energy technologies. Any heat produced should be included in energy output only if it is used for an economically justified purpose. When heat pumps are combined with bioenergy to achieve energy system integration, the formula provided in Annex VII to Directive (EU) 2018/2001 should be used. Moreover, definitions from both that Directive and Directive (EU) 2023/1791 of the European Parliament and of the Council⁵ should apply to ensure consistency in the relevant calculations.
- (12) Emissions from biomethane leakage should be introduced for both biogas and biomethane, amending the formula in the methodology in Part B of Annex VI. In addition, a wider selection of feedstock with default values suitable for biogas and biomethane production should be included. This includes sewage sludge, gasification pathways from short rotation forestry and methanation (1 to 500 km) and waste wood and methanation (500 to 2500 km). Liquified biomethane should also be added as a pathway. Furthermore, the fossil fuel comparator for biomethane injected into the gas grid should be clarified. The updates relevant to gaseous biomass fuels are designed to reduce the administrative burden on producers and are aligned with the priorities of the European Green Deal and the Methane Pledge.
- (13) Directive (EU) 2018/2001 should therefore be amended accordingly,

HAS ADOPTED THIS DIRECTIVE:

Article 1

Annexes V and VI to Directive (EU) 2018/2001 are amended in accordance with the Annex to this Directive.

⁵ Directive (EU) 2023/1791 of the European Parliament and of the Council of 13 September 2023 on energy efficiency and amending Regulation (EU) 2023/955 (OJ L 231, 20.9.2023, p. 1, ELI: <http://data.europa.eu/eli/dir/2023/1791/oi>).

Article 2

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive *by [18 month after adoption PO: Please insert the date.]* at the latest. They shall immediately inform the Commission thereof.

When Member States adopt those provisions, they shall contain a reference to this Directive or shall be accompanied by such a reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.

2. Member States shall communicate to the Commission the text of the main measures of national law which they adopt in the field covered by this Directive.

Article 3

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

Article 4

This Directive is addressed to the Member States.

Done at Brussels,

*For the Commission
The President
Ursula von der Leyen*