



Brussels, XXX
[...] (2022) XXX draft

COMMISSION DELEGATED REGULATION (EU) .../...

of XXX

**supplementing Directive (EU) 2018/2001 of the European Parliament and of the Council
by establishing a Union methodology setting out detailed rules for the production of
renewable liquid and gaseous transport fuels of non-biological origin**

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

Renewable liquid and gaseous transport fuels of non-biological origin are important for increasing the share of renewable energy in sectors that are expected to rely on liquid fuels in the long term. The recast Renewable Energy Directive¹ (“the “Directive”) introduces new provisions to promote the use of renewable liquid and gaseous transport fuels of non-biological origin. The Commission is requested to develop a reliable Union methodology to ensure that the electricity used to produce of renewable liquid and gaseous transport fuels of non-biological origin is of renewable origin including rules for (i) the temporal and geographical correlation between the electricity production unit and the fuel production, and (ii) ensuring that the fuel producer is adding to the renewable deployment or to the financing of renewable energy.

2. CONSULTATIONS PRIOR TO THE ADOPTION OF THE ACT

As this is a technical proposal, it did not need to be supported by an impact assessment or an open public consultation, which are usually only required for major initiatives.

The proposal draws on the results of several consultation exercises carried out by the Commission implementing of Article 27(3) of the Directive, including [xx] meetings of the expert group on renewable fuels and [xx] stakeholder workshops.

The draft proposal was published for public feedback on the Better Regulation Portal from [...] to [...] 2020 [*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 seventh subparagraph of Article 27(3) of the Directive, which empowers the Commission to adopt a delegated act establishing a Union methodology, setting out detailed rules by which economic operators are to comply with the requirements laid down in the fifth and sixth subparagraphs of Article 27(3) of the Directive.

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 (recast) (OJ L 328, 21.12.2018, p. 82).

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THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

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 27(3), seventh subparagraph thereof,

Whereas:

- (1) Renewable liquid and gaseous transport fuels of non-biological origin are important for increasing the share of renewable energy in sectors that are expected to rely on gaseous and liquid fuels in the long term, such as maritime and aviation. Directive (EU) 2018/2001 requires the Commission to adopt a delegated act to establish a Union methodology setting out detailed rules on electricity used where liquid and gaseous transport fuels of non-biological origin can be considered fully renewable. To this end and considering the overall environmental objectives in Directive (EU) 2018/2001 it is necessary to lay down clear rules, based on objective and non-discriminatory criteria. As a principle, liquid and gaseous fuels of non-biological origin are considered renewable when the hydrogen component is produced in an electrolyser that uses renewable electricity. This renewable electricity may be supplied by an installation that is directly connected to the installation that produces renewable liquid and gaseous transport fuels of non-biological origin, or may come from the grid.
- (2) The energy content of nearly all renewable liquid and gaseous transport fuels of non-biological origin is based on renewable hydrogen produced via electrolysis. The emission intensity of hydrogen produced from fossil-based electricity is substantially higher than the emission intensity of hydrogen produced from natural gas in conventional processes. The use of renewable hydrogen will therefore only lead to greenhouse gas emission savings if incentives for an increase of fossil electricity generation are prevented by an increase in the production of renewable electricity. Given the enormous amount of additional renewable electricity generation needed to progress in the decarbonisation of current fossil electricity production, this can only be ensured by including strict criteria for additionality in this methodology. Directive (EU) 2018/2001 sets out the overall framework for stepping up the share of energy from renewable sources, including renewable electricity, and its amendment put forward an EU-level target of at least 45% for 2030.
- (3) Renewable hydrogen will contribute towards reducing greenhouse gas emissions in the Union only if it is avoided that incentives for the production of more fossil electricity

² OJ L 328, 21.12.2018, p. 82.

are provided, which would lead to an increased level of emissions. In order to account hydrogen as fully renewable, the production of renewable hydrogen should therefore incentivise the deployment of new renewable electricity generation capacity (principle of additionality) or take place at times where the electrolyzers support the integration of renewable power generation into the electricity system or in bidding zones where renewable electricity already represents the dominant share and adding additional renewable electricity generation capacity would not be necessary or possible.

- (4) Following Russia's invasion of Ukraine, the need of the Union for a rapid clean energy transition and the reduction of its dependency on fossil fuel imports has become even clearer and stronger. The Commission outlined in the RepowerEU Communication³ its strategy to become independent from Russian fossil fuels well before the end of the decade. Renewable liquid and gaseous transport fuels of non-biological origin play an important role in this endeavour as well as reducing reliance on fossil fuel imports in general. In order to enable the ramp-up of the production of renewable liquid and gaseous transport fuels of non-biological origin, the criteria on additionality as well as on temporal correlation should be gradually phased-in, allowing market players to put in place the necessary technological solutions.
- (5) The measures proposed in the context of the RepowerEU plan adopted on 18 May to increase the roll out of solar and wind energy, including simplifying and accelerating permitting process, the channelling EU financing towards renewable energy projects and investments in reskilling and upskilling of the workforce will support making renewable electricity available for the production of renewable liquid and gaseous transport fuels of non-biological origin as well as for other uses. Production of renewable liquid and gaseous transport fuels of non-biological origin will help to integrate the additional production of variable renewable electricity into the energy system.
- (6) Planning and construction of installations generating renewable electricity are often subject to significant delays in the permitting processes despite being scheduled to enter into operation at the same time as the installation producing renewable liquid and gaseous transport fuel of non-biological origin. It is therefore appropriate to consider a time period of up to 36 months when determining if an installation generating renewable electricity has come into operation after, or at the same time as the installation producing renewable liquid and gaseous transport fuel of non-biological origin.
- (7) The requirements for additionality and temporal and geographic correlation are particularly important in an environment where electricity generation still relies to a significant degree on fossil fuels and where the production of renewable liquid and gaseous transport fuels of non-biological origin is likely to be subject to public support. This reliance on fossil fuels for electricity generation will decline over time with the implementation of the European Green Deal and the share of energy from renewable sources will increase. The Commission will follow this development closely and reassess the requirements set out in this Regulation when the target for the overall share of renewable energy set out in Directive (EU) 2018/2001 is achieved.
- (8) If the installation producing renewable electricity and the installation producing hydrogen are not only directly connected but are also connected to the grid, evidence should be provided that the electricity used to produce hydrogen is supplied through

³ COM(2022) 108 final

the direct connection. The installation supplying electricity for hydrogen production through a direct connection should always supply renewable electricity. If it supplies non-renewable electricity, for instance obtained from the grid, the resulting hydrogen will not be considered renewable.

- (9) Regarding renewable hydrogen produced from electricity sourced from the grid, its production should incentivise, through a power purchase agreement, the deployment of new renewable electricity generation capacity that does not receive financial support since the renewable hydrogen is already being supported by being eligible to count towards the obligation on fuel suppliers set out in Article 25 of Directive (EU) 2018/2001. The cancellation of the power purchase agreement should not be detrimental to the possibility for the installation producing renewable electricity to be still considered as a new installation when covered by a new power purchase agreement. Furthermore, any extension of the installation producing renewable hydrogen that increases its generation capacity may be considered to come into operation at the same time as the original installation. This would avoid the potential need to conclude power purchase agreements with different installations every time there is an extension, thus reducing administrative burden. Financial support that is repaid and/or financial support for land or grid connections for the renewable power generation facility are not considered.
- (10) In order to ensure that the renewable hydrogen is produced from renewable electricity, the production of renewable electricity should take place at the same time as the consumption of electricity for the production of renewable hydrogen and there should be no electricity grid congestion between the electrolyser producing renewable hydrogen and the installation generating renewable electricity.
- (11) In order to demonstrate that the production of renewable electricity takes place at the same time as the consumption of electricity, hydrogen producers should show that production of renewable hydrogen takes place in the same calendar hour as the production of the renewable electricity or that renewable electricity that has been locally stored during such time periods is used.
- (12) In order to ensure that there is no electricity grid congestion between the electrolyser producing renewable hydrogen and the installation generating renewable electricity, both installations should be located in the same bidding zone or, in case they are located in neighbouring bidding zones, the electricity price in the bidding zone where the installation generating renewable electricity is located should be equal or higher than in the bidding zone where the renewable liquid and gaseous transport fuel of non-biological origin is produced or the installation generating renewable electricity under the power purchase agreement should be located in an offshore bidding zone adjacent to the bidding zone where the electrolyser is located.
- (13) In order to address national specificities of their bidding zones and to support the integrated planning of electricity and hydrogen networks, Member States should be allowed to set out additional criteria concerning the location of electrolysers.
- (14) Articles 7 and 19 of Directive (EU) 2018/2001 provide sufficient assurances that the renewable properties of electricity used for the production of renewable hydrogen are claimed only once and only in one end-use sector. Article 7 of that Directive ensures that, when calculating the overall share of renewables in gross final energy consumption, renewable liquid and gaseous transport fuels of non-biological origin are not accounted because the renewable electricity used to produce them has already been accounted. Article 19 of that Directive should avoid that both the producer of the

renewable electricity and the producer of the renewable liquid and gaseous transport fuels of non-biological origin produced from that electricity can receive guarantees of origin by ensuring that the guarantees of origin issued to the producer of renewable electricity are cancelled.

- (15) Because of the time needed for the planning and construction of installations generating renewable electricity as well as for developing technologies allowing for a quick adjustment of hydrogen production and the synchronisation of electricity generation and hydrogen production, the requirements set out in Article 4(2), point (a) and (b) of this Regulation should apply only from 1 January 2027. For the same reasons, the hourly matching of the production of renewable hydrogen and the production of the renewable electricity set out in Article 4(2)(c)(i) and (ii) should be gradually phased in. Until 31 December 2026, a monthly matching should apply.

HAS ADOPTED THIS REGULATION:

Article 1

Subject matter

This Regulation lays down detailed rules for the production of renewable liquid and gaseous transport fuels of non-biological origin and the resulting fuel as fully renewable.

Article 2

Definitions

For the purposes of this Regulation, the following definitions apply:

- (1) ‘bidding zone’ means bidding zone as defined in Article 2, point (65), of Regulation (EU) 2019/943 of the European Parliament and of the Council⁴ for Member States, or an equivalent concept for third countries;
- (2) ‘direct line’ means direct line as defined in Article 2, point (41), of Directive 2019/944 of the European Parliament and of the Council⁵;
- (3) ‘installation generating renewable electricity’ means individual units, or groups of units, producing electricity in one or several locations from the same or from different renewable sources, as defined in Article 2 (1) of Directive (EU) 2018/2001, excluding units producing electricity from biomass and storage units;
- (4) ‘renewable hydrogen’ means hydrogen derived only from renewable energy sources other than biomass;
- (5) ‘fuel producer’ means an economic operator that produces renewable liquid and gaseous transport fuel of non-biological origin;
- (6) ‘coming into operation’ means starting production of renewable electricity for the first time or following a repowering as defined under Article 2(10) of Directive 2018/2001 requiring investments exceeding 30% of the investment that would be needed to build a similar new installation;

⁴ Regulation (EU) 2019/943 of the European Parliament and of the Council of 5 June 2019 on the internal market for electricity (OJ L 158, 14.6.2019, p. 54).

⁵ Directive 2019/944 of the European Parliament and of the Council of 5 June 2019 on common rules for the internal market for electricity and amending Directive 2012/27/EU (OJ L 158, 14.6.2019, p. 125).

- (7) ‘smart metering system’ means smart metering system as defined in Article 2(23) of Directive 2019/944;
- (8) ‘imbalance settlement period’ means imbalance settlement period as defined in Article 2, point (15), of Regulation (EU) 2019/943 within the Union, or an equivalent concept for third countries.

Article 3

Rules for counting electricity sourced from directly connected installations as fully renewable

For the purpose of demonstrating compliance with the criteria set out in Article 27(3), fifth subparagraph, of Directive (EU) 2018/2001 for counting electricity obtained from direct connection to an installation generating renewable electricity as fully renewable, the fuel producer shall provide evidence on the following:

- (a) the installations generating renewable electricity are connected to the installation producing renewable liquid and gaseous transport fuel of non-biological origin via a direct line, or the renewable electricity production and production of renewable liquid and gaseous transport fuel of non-biological origin take place within the same installation;
- (b) the installations generating renewable electricity came into operation not earlier than 36 months before the installation producing renewable liquid and gaseous transport fuel of non-biological. Where additional production capacity is added to an existing installation producing renewable liquid and gaseous transport fuel of non-biological origin, the added capacity shall be considered to be part of the existing installation, provided that the capacity is added at the same site and the addition takes place no later than 24 months after the initial installation came into operation;
- (c) the installation producing electricity is not connected to the grid, or the installation producing electricity is connected to the grid but a smart metering system that measures all electricity flows from the grid shows that no electricity has been taken from the grid to produce renewable liquid and gaseous transport fuel of non-biological origin.

Article 4

Rules for counting electricity taken from the grid as fully renewable

1. Fuel producers may count electricity taken from the grid as fully renewable if the installation producing the renewable liquid and gaseous transport fuel of non-biological origin is located in a bidding zone where the average proportion of renewable electricity exceeded 90% in the previous calendar year and the production of renewable liquid and gaseous transport fuel of non-biological origin does not exceed a maximum number of hours set in relation to the proportion of renewable electricity in the bidding zone. This maximum number of hours shall be derived by multiplying the total number of hours in each calendar year by the share of renewable electricity reported for the bidding zone where the renewable hydrogen is produced.
2. Fuel producers may also count electricity taken from the grid as fully renewable if they have concluded one or more renewables power purchase agreements with economic operators producing renewable electricity in one or more installations generating renewable electricity for an amount that is at least equivalent to the

amount of electricity that is claimed as fully renewable and the electricity claimed is effectively produced in this or these installations, provided that the following criteria are met:

- (a) the installation generating renewable electricity came into operation not earlier than 36 months before the installation producing the renewable liquid and gaseous transport fuel of non-biological origin.

Where an installation generating renewable electricity complied with the requirements set out in the first subparagraph under a renewables power purchase agreement with a fuel producer that has ended, it shall be considered to have come into operation at the same time as the installation producing the renewable liquid and gaseous transport fuel of non-biological origin under a new renewables power purchase agreement.

Where additional production capacity is added to an existing installation producing renewable liquid and gaseous transport fuel of non-biological origin, the added capacity shall be considered to have come into operation at the same time as the initial installation, provided that the capacity is added at the same site and the addition takes place no later than 36 months after the initial installation came into operation;

- (b) the installation generating renewable electricity has not received support in the form of operating aid or investment aid, excluding support received by installations before the repowering referred to in Article 2(6) and support that does not constitute net support, such as support that is fully repaid;

- (c) the renewable liquid and gaseous transport fuel of non-biological origin is produced:

- (i) during the same one-hour period as the renewable electricity produced under the renewables power purchase agreement; or

- (ii) from renewable electricity from a storage asset that is located behind the same network connection point as the electrolyser and that has been charged during the same one-hour period in which the electricity under the renewables power purchase agreement has been produced, or;

- (iii) during a one-hour period where the clearing price of electricity resulting from single day-ahead market coupling in the bidding zone, as defined in Article 39 (2)(a) of Regulation (EU) 2015/1222, is lower or equal to 20€ per MWh or lower than 0,36 times the price of an allowance to emit one tonne of carbon dioxide equivalent during a specified period for the purpose of meeting the requirements of Directive 2003/87/EC.

- (d) at least one of the following conditions as regards the location of the electrolyser is fulfilled:

- (a) the installation generating renewable electricity under the renewables power purchase agreement is located, or was located at the time when it came into operation, in the same bidding zone as the electrolyser; or

- (b) the installation generating renewable electricity is located in a neighbouring bidding zone and electricity prices in the relevant time period on the day-ahead market referred to in point (c) in the neighbouring bidding zone is equal or higher than in the

bidding zone where the renewable liquid and gaseous transport fuel of non-biological origin is produced; or

- (c) the installation generating renewable electricity under the renewables power purchase agreement is located in an offshore bidding zone adjacent to the bidding zone where the electrolyser is located.
- 3. By derogation from Article 4(2), for the purpose of producing or using renewable liquid and gaseous transport fuel of non-biological origin in installations or parts of installations used for research, testing and demonstration, only the criteria under Article 4(2)(a),(c) and (d) need to be met.
- 4. Electricity taken from the grid that is used to produce renewable liquid and gaseous transport fuel of non-biological origin may also be counted as fully renewable if the fuel producer demonstrates that the electricity used to produce renewable liquid and gaseous transport fuel of non-biological origin is consumed during an imbalance settlement during which it can be demonstrated, based on evidence from the national transmission system operator, that power-generating facilities using renewable energy sources were downward redispatched as per Article 13 of Regulation (EU) 2019/943 and the electricity consumed for the production of renewable liquid and gaseous transport fuel of non-biological origin is reducing the need for redispatching by a corresponding amount.
- 5. Without prejudice to Articles 14 and 15 of Regulation (EU) 2019/943, Member States may introduce additional criteria concerning the location of electrolysers and the installation producing renewable electricity to the criteria set out in paragraph 2, point (d), in order to ensure compatibility of capacity additions with the national planning of the hydrogen and electricity grid. Any additional criteria shall have no negative impact on the functioning of the internal electricity market.

Article 5

Common rules

The following information shall be documented for each hour:

- (a) The amount of electricity used to produce renewable liquid and gaseous transport fuel of non-biological origin. This information shall be further detailed as follows:
 - (i) the amount of electricity sourced from the grid that does not count as fully renewable as well as the proportion of renewable electricity;
 - (ii) the amount of electricity that does count as fully renewable because it has been obtained from a direct connection to an installation generating renewable electricity as set out in Article 3;
 - (iii) the amount of electricity sourced from the grid that does count as fully renewable according to the criteria set out in Article 4(1);
 - (iv) the amount of electricity that does count as fully renewable according to the criteria set out in Article 4(2).
 - (iv) the amount of electricity that does count as fully renewable according to the criteria set out in Article 4(3).
- (b) The amount of renewable electricity generated by the installations generating renewable electricity, regardless of whether they are directly connected to an electrolyser and regardless of whether the renewable electricity is used for the

production of the renewable liquid and gaseous transport fuel of non-biological origin or for other purposes.

- (c) The amounts of produced renewable and non-renewable liquid and gaseous transport fuel of non-biological origin produced.

Article 6

Certification of compliance

The rules set out in this Regulation apply regardless of whether the liquid and gaseous transport fuel of non-biological origin is produced inside or outside the territory of the Union.

Where an economic operator provides evidence or data obtained in accordance with a scheme that has been the subject of a decision in accordance with Article 30(4) of Directive (EU) 2018/2001, to the extent that such decision covers the demonstrating of compliance of the scheme with Article 27(3), fifth and sixth subparagraphs, of that Directive, a Member State shall not require the suppliers of renewable liquid and gaseous transport fuels of non-biological origin to provide further evidence of compliance with the criteria set out in this Regulation.

Article 7

Transitional phase

Article 4(2), points (a) and (b) shall apply from 1 January 2027.

Until 31 December 2026, by way of derogation from Article 4 (2) (c)(i) and Article 4 (2) (c)(ii), the renewable liquid and gaseous transport fuel of non-biological origin shall be produced during the same calendar month as the renewable electricity produced under the renewables power purchase agreement or from renewable electricity from a storage asset that is located behind the same network connection point as the electrolyser and that has been charged in during the same calendar month in which the electricity under the renewables power purchase agreement has been produced.

For projects involving State aid, other than where the aid remunerates only capital expenditure, the derogations in the second paragraph shall not apply.

Article 8

Scope of application

Article 4(2), points (a) and (b) do not apply to installations producing renewable liquid and gaseous transport fuel of non-biological origin that come into operation before 1. January 2027. Any additional production capacity added to these installations following their entry into operation will fall under the scope of application of this Regulation.

Article 9

Entry into force

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

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

*For the Commission
The President
Ursula von der Leyen*

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