Joint industrial letter on Delegated Act GHG methodology RFNBO / RCF

Delegated Act on Methodology for determining GHG emission savings from RFNBO/RCF (Annex I)

Identification of relevant areas subject to multiple interpretation and proposal for a clear and unique interpretation in the system documents of future accredited certification bodies

The signatories of this letter are committed to the energy transition and the objectives of the Green Deal, identifying Renewable Fuels of Non-Biological Origin (RFNBO) and Recycled Carbon Fuels (RCF) as one of the key common pillars to contribute to a low carbon transport and industry sector in Europe. The development of the RFNBO technologies followed by their scale-up and mass deployment both in Europe and internationally need to start in this decade to ensure the objectives set by the FitFor55 package are effectively achieved. In this context, the co-signers warmly welcome the initiative of the European Commission to propose a detailed methodology with the required criteria to provide a **stable framework** to rule the production of these RFNBO/RCF in the close future.

In preparation for the **certification of RFNBO/RCF cases**, a core group of technical experts from different member companies in different sectors have assessed the implications of the methodology described in the Delegated Act and **identify some key relevant areas** subject to **multiple interpretation** that, in the absence of harmonisation across certification bodies, **would likely lead to a non-homogeneous** landscape, leaving to the auditors the final decision on aspects that would be key to determine the business case for the industrial production of these fuels.

Following the entry into force of the Delegated Acts, this letter raises the main concerns identified, summarising **the proposals** that could lead to a **workable interpretation of the provisions**, in no contradiction with the text included in these Delegated Acts and Renewable Energy Directive.

Calling for a clear and unique interpretation of **the relevant aspects identified, ideally as part of *the system documents* of future accredited certification bodie**s, the ultimate objective of this letter is to contribute to a **uniform interpretation across Europe**, avoiding any potential market distortion from multiple interpretations by different auditors in the non-that-far-future.

Call for clarification on the following key areas:

KEY ISSUES

1. Electricity as inputs

1.1. Ambiguity on rules when sourcing mix of fully renewable electricity and inputs from the grid

A case study with an electrolyser sourced simultaneously with multiple inputs has been investigated, using both fully renewable electricity from wind/solar (covered by PPA and complying with additionality, temporal and geographical correlation requirements) and electricity from the grid (country mix). In the absence of a clear interpretation on how much electricity from the input could qualify as RFNBO as compliance options against Renewable Energy Directive (RED) targets, multiple interpretations could be implemented potentially undermining the amount of RFNBO used for compliance. Concerning the same case, a question mark arises about whether PPAs are needed to account for the renewable share of electricity in the grid.

Interpretation according to DA GHG Methodology and RED II(I): The **amount of renewable electricity** and corresponding hydrogen production that can qualify as RFNBO in a given time interval is the **sum of the fraction** complying with the **DA "fully renewability"** criteria plus, for the fraction that does not qualify as fully renewable, the **share of renewable energy in the electricity mix** according to RED II Art. 27(3).

1.2. Claim of zero-emission for grid electricity used

In the absence of clear references to electricity used as utilities, the question remains around whether all units which would like to source renewable electricity to reduce the GHG intensity of their operations need to be certified as a process unit and therefore, would need to **fulfil all the criteria stated in the DA "additionality"** to be considered as *fully renewable* (DA art 27.3 with a carbon intensity equal to 0) **or whether PPAs** would be enough to **demonstrate renewability**.

Similarly, for the recognition of the renewable share of the grid as RFNBO, we understand that no PPAs would be needed following RED II, Article 27.3 (where the calculation of the share of renewable electricity in the electricity supplied to road and rail vehicles shall refer to the two-year period before the year in which the electricity is supplied in their territory).

1.3. Electricity as a way to enhance heating value

Article 3 of the DA GHG methodology presents an ambiguous interpretation regarding to which specific examples the clause "*For electricity inputs that are used to* ***enhance the heating value of the fuel*** *or intermediate products the relevant energy is the energy of the electricity*" can be applied. Clarification on to which specific examples this clause could be applied is deemed essential in order to ensure a homogeneous calculation of the RFNBO fraction across different industrial plants.

1.4. Selection of the temporal interval for GHG calculations

Different considerations regarding the "time interval" "(DA GHG Methodology *up to 1 month*) and "temporal correlation" (DA "additionality" 1h after 2030) are presented in the two RFNBO related Delegated Acts which could lead to multiple interpretations. Questions arise regarding whether and if so, how, a one-month period be allowed for GHG emission calculations beyond 2030.

1.5. Use of PPAs with sources other than renewable

The proposed methodology does not provide a clear guidance on how to calculate emission intensity of electricity sourced from a non-renewable PPA. In our interpretation, if the same conditions regarding, additionality, temporal and geographical correlation are met, project promotors should be able to account the actual emission factors of the dedicated electricity source as an alternative to the emission intensity appropriate for the relevant bidding zone.

2. Other inputs: water supply. How to calculate GHG calculation in a practical way

Demineralised water required for the water electrolysis will most likely require a dedicated infrastructure. Actual data over the whole supply chain up to the point of consumption could add **excessive administrative data gathering burdens** and may not be always available. Therefore, in order to allow a **practical implementation** of this provision, it is deemed necessary that the best available data / estimate is allowed when and as required for water consumption as elastic input. **Default values** for the different pre-treatment and origin of raw water could be also considered as part of the Delegated Act or the system documents of certifications bodies, when data is not available.

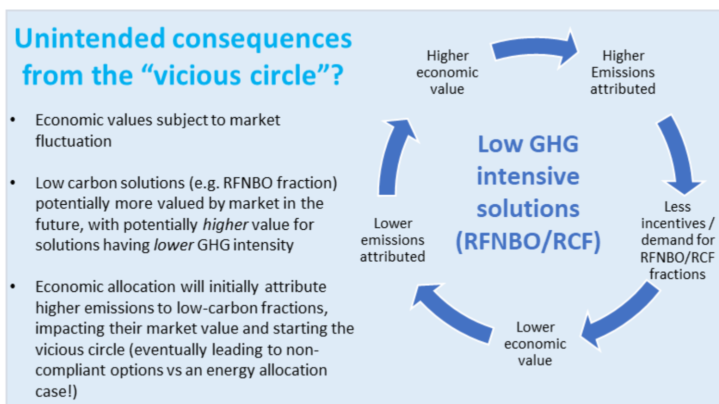
3. Transport related emissions

In the absence of disaggregated default values for the e_{td} term as in RED II Annex part C for biofuels, **look-up tables** from reliable external sources in terms of emissions per transport mode, distance and eventually load factors should be allowed as a practical way to estimate these provisions in the certification process.

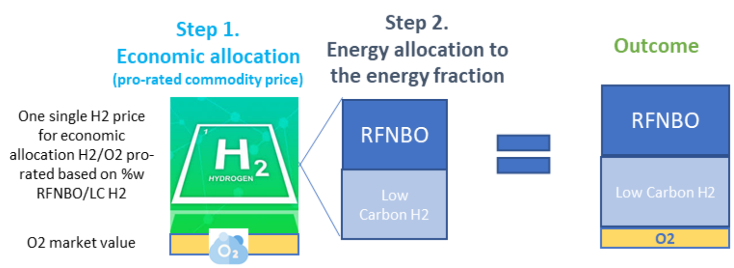
4. Multiple co-products: Implications derived from choice of allocation method. The « vicious circle »

In the case of an electrolyser sourced by both fully renewable electricity and electricity from the mix, the outcome of an electrolyser in a given period could effectively be the mix of two different type of fuels: the fraction qualifying as RFNBO and the non-RFNBO fraction which may qualify as **low carbon hydrogen** according to the Gas&H_2 package (*"'low-carbon hydrogen' means hydrogen the energy content of which is derived from non-renewable sources, which meets a greenhouse gas emission reduction threshold of 70%").* According to the article A.1 (Annex) of the DA GHG methodology (mix of inputs), both RFNBO and Low Carbon Hydrogen fraction of the outcome should have the same Carbon Intensity.

However, a strict interpretation of DA GHG methodology may lead to severe unintended consequences derived from the application of economic allocation. A "vicious circle" will likely be created where a scenario involving O_2 as a commercialised co-product is presented. As O_2 has no energy content, economic allocation will apply to H_2 RFNBO and low carbon H_2 fractions, resulting in two different carbon intensity values for each of them, higher for the H_2 RFNBO fraction, compromising eligibility of H_2 RFNBO artificially and creating instability (fluctuations) in their market value.



<u>Interpretation proposed:</u> In order to minimise the unintended consequences, a **two-step allocation approach** between energy and non-energy content fractions, consistently with the wording included in the DA GHG methodology, is proposed leading to the same carbon intensity for both RFNBO H_2 and low carbon H_2.



5. Mix of inputs

5.1. Co-processing. Implications for the calculation of both share of each type of fuel in output and associated carbon intensities

The co-processing of different renewable, recycled, biogenic and/or fossil feedstocks via syngas and Fischer-Tropsch (FT) pathway is deemed to fall under the exception lied down in article A.1 (Annex), leading to a different carbon intensity of the fractions in the output estimated […] *on a proportional basis of the energetic value of inputs […]*. This case poses a number of questions when applying the provisions of the DA GHG methodology regarding:

- whether individual carbon intensity values can be estimated for each fraction of the outcome or just *conventional* and *non-conventional* (covering RFNBO, recycled and biofuels) and with each non-conventional having equal carbon intensity.
- the differences between the *feedstock* and *input* concept in a multi-step conversion process (i.e. process consisting of multiple conversion units) and the implications in terms of the different Lower Heating value (LHV) when either a *feedstock* or an *input* based allocation is followed (The Key question being **whether allocation on LHV basis should apply to (dry) feedstocks or to syngas stream** [1]).
- the actual estimate of the carbon intensity of each fraction, recognising the clear differentiation between the type of inputs and their related input emissions and associated ex-use credits)
- or the possibility to apply free allocation of the inputs to the different co-products (in terms of type of input).

Beyond the DA on GHG methodology, the clear recognition of the qualification of the fractions in the outcome as different type of fuels based on the inputs is deemed essential also in the context of the ReFuelEU Aviation regulation.

5.2. RFNBO hydrogen as intermediate for production of conventional fuels. Link with RED II(I).

RFNBO hydrogen is recognised as an intermediate product when used as an input to a hydrotreatment unit in a conventional refinery, qualifying as a compliance option in RED-II and RED-III transport (Article 25) with similar considerations applied to a biofuel production unit. Consistently, its energy content is excluded from the RED III Industry target (Article 22a) when used as inputs for production of both transport fuels and biofuels. In this context, a footnote on article A.3 (Annex) of the DA GHG methodology states that "*RFNBO used as intermediate products for the production of conventional fuels* <u>*are not considered*</u>*"* creating uncertainty on how to apply this provision in terms of its GHG calculation. A **strict interpretation of article A.3 may lead to the absence of criteria** to estimate the GHG emissions referring to the intermediate fraction, creating a legal gap when using intermediate RFNBO in compliance with RED transport target and eventually compromising eligibility. Based on the footnote and related RED articles mentioned before, our **interpretation** considers that the electrolyser unit defines the boundary limits for the calculation of both energy content of RFNBO intermediate and associated GHG emissions. **A clarification is deemed essential to recognise that** all the energy content **of the** RFNBO intermediate as input to the conventional process unit will qualify for RED compliance with no associated fossil process emissions being allocated from hydrotreater / fossil inputs.

6. CO_2 from industrial sources with sustainable bio-origin, no combustion related: CO_2 source eligibility

According to the point 10 c of the DA GHG methodology, CO_2 stemming from the production or the combustion of biofuels, bioliquids or biomass fuels complying with the sustainability and GHG saving criteria would be eligible for the recognition of *e ex-use credits* associated with the avoided emissions from existing use or fate with no cut-off date. However, there could be cases of industrial point sources, such as paper & pulp industry, where part of the emissions has a bio-origin, released during the process itself and not as a result of combustion. In this case, a strict interpretation of the DA GHG methodology (Annex point 10 option a) may lead to a case in which CO_2 from these sources, despite its biogenic origin, appears to be only allowed before 2041. Moreover, CO_2 stemming from combustion of biomass or

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[1] Technical clarification: Syngas is a mixture of carbon monoxide and hydrogen. Feedstocks, such as biomass, renewable power, CO2, water, waste, fossil, are converted into carbon monoxide and hydrogen (also called syngas); next, carbon monoxide and hydrogen are combined in an FT unit to make FT wax, which is next converted in a hydroprocessing unit (with extra addition of renewable hydrogen, as needed) into final FT products (fuels), like kerosene.

biofuels for purpose of electricity generation would only be allowed before 2036. The wording in article A.10a (Annex) "*CO_2 stemming from the combustion of fuels for electricity generation*" is deemed ambiguous in this regard. Clarification in this regard would avoid multiple interpretations during the future certification processes without jeopardising the potential of CO_2 point sources to be used for RFNBO production in the medium term.

7. Recycled Carbon Fuels (RCF)

7.1. Interpretation on the best economic alternative for the ex-use calculation

According the Article 9(c) (annex) where rigid inputs are diverted from a new installation, "*the impact of diverting the input from the most economic alternative use shall be taken into account*". When combined with the fact that there is no definition or procedure on how to define the best economic alternative, article 9(c) would create unnecessary risk for investors. In order to reduce this risk, it should be made clear that only the best economic alternative at the time the installation enters into operation (or even at the time of FID) **should be taken into account**. The reason for this is to eliminate a situation where just a couple of year into operation, due to unforeseen changed market conditions, a different alternative would suddenly become economically more favourable, negatively impacting the GHG emission footprint and thus potentially jeopardizing the financial viability of the investment.

7.2. Credits for avoided landfilling

A key goal of EU waste policy is to cut the amount of waste sent to landfill with RCF as a potential valuable option to valorise the non-recyclable fraction of this waste (as RCF can be produced from waste "*not suitable for material recovery in accordance with Article 4 of Directive 2008/98/EC*" (REDII, art. 2, pt 35). However, a strict interpretation of DA GHG methodology in isolation, without considering other provisions in different pieces of legislation, would lead to a case in which future RCF routes are disincentivised with no recognition from the existing use or fate of the inputs (e ex-use) (e.g. when qualifying feedstocks for RCF production are being diverted from landfill/incineration without energy recovery. According to the "*Methodology for GHG Emission Avoidance Calculation*" of the ETS Innovation Fund, waste currently destined for landfill or incineration without energy recovery are both part of the same case and avoided emissions can be fully counted as negative. Seeking for consistency between the DA GHG methodology for RFNBO/RCF and the aforementioned one in the ETS Innovation Fund, the co-signers understand that the **case of rediverting waste from landfill should be treated in the same way as waste used for incineration without energy recovery**.

The signatories thank the European Commission, certification scheme owners and relevant stakeholders for the kind consideration of the relevant points aforementioned towards an effective and homogeneous certification of RFNBO and RCF, remaining at the disposal of any interested party for any further clarification in this regard.

HydrogenEurope - European association representing the interest of the hydrogen industry and its stakeholders

CO2 Value Europe - Association representing the Carbon Capture and Utilisation (CCU) community in Europe

Methanol Institute - Global trade association for the Methanol Industry

FuelsEurope –European Association of Fuel Producers