

November 18, 2021

**Re: Request for Comments: Renewable Energy Directive review (RED III), proposal for a directive – COM (2021) 557**

Electrochaea GmbH (Electrochaea) appreciates the opportunity to submit the following comments to the European Commission consultation on the Renewable Energy Directive review (RED III). Our comments address questions in the proposal for a directive – COM (2021) 557, Article 1 (19) on Article 29a and Article 1 (11) on Article 22a.

Electrochaea is a supplier of an industrial scale biomethanation technology that uses a biocatalyst to produce e-methane from carbon dioxide (CO<sub>2</sub>) and green hydrogen (H<sub>2</sub>). The product is a renewable fuel that is referred to as biomethane, renewable gas or e-methane.

Renewable fuels, such as e-methane, play a crucial role in the green economy, especially in hard-to-decarbonize sectors. When CO<sub>2</sub> must be emitted from hard-to-decarbonize sectors or biological sources, the production of e-methane allows low-carbon fuels to be produced from that CO<sub>2</sub>. Thus, these renewable fuels play a role in the ability of the EU to meet the net-zero target by 2050.

Electrochaea welcomes the Commission review on the RED directive and the revision on the incentives towards reaching the green transition. The EU energy and climate policies should ensure a long-term framework that allows businesses to capture CO<sub>2</sub> and use that CO<sub>2</sub> for the production of low-carbon solutions. These fuels should be classified as RFNBOs (renewable fuels of non-biological origin), since the energy in these fuels is derived from hydrogen produced with renewable electricity and water. Increasing the demand for biomethane can drive additional economic benefits for the European population.

Electrochaea has the following comments to the Renewable Energy Directive review (RED III) proposal for a directive – COM (2021) 557.

## **I. Comments**

### **A. Definition of RFNBO in Article 2 point (36).**

Electrochaea welcomes the modified definition of Renewable Fuels of Non Biological Origin enabling the use of these fuels in multiple economic sectors in addition to transport.

### **B. Clarification is needed on GHG emissions savings calculation based on the new article 29a.**

A new Article 29a on greenhouse gas emissions saving criteria is introduced on page 46.  
*“1. Energy from renewable fuels of non-biological origin shall be counted towards Member*

*States' shares of renewable energy and the targets referred to in Articles 3(1), 15a(1), 22a(1), 23(1), 24(4) and 25(1) only if the greenhouse gas emissions savings from the use of those fuels are at least 70 %.*” And “2. *Energy from recycled carbon fuels may be counted towards the greenhouse gas emissions reduction target referred to in Article 25(1), first subparagraph, point (a), only if the greenhouse gas emissions savings from the use of those fuels are at least 70%.*” The new article 29a (1) and (2) require two clarifications: (1) it must be explicitly stated if the benchmark for the 70% GHG emission reductions is based on 94 gCO<sub>2</sub>/MJ as stated in the footnotes and annexes in RED II. And (2) how to calculate the GHG emissions savings from RFNBOs and RCFs, which use hydrogen and carbon dioxide as feedstocks, should be clearly defined. Specifically, the emissions related to the use of renewable energy to produce hydrogen and the means of accounting for the CO<sub>2</sub> depending upon its source will require explicit instructions for emissions savings calculation.

Since the delegated act specifying the method to calculate the greenhouse gas emissions saving from RFNBOs has not yet been published, it is not currently possible to determine if a given RFNBO will meet the criteria included in Article 29a.

**C. The link between ETS and REDIII directives indicates that captured CO<sub>2</sub> used for renewable fuels production should be deemed carbon neutral.**

On page 46 – 47, in Article 29a (3) it is stated that “*The Commission is empowered to adopt delegated acts in accordance with Article 35 to supplement this Directive by specifying the methodology for assessing greenhouse gas emissions savings from renewable fuels of non-biological origin and from recycled carbon fuels. The methodology shall ensure that credit for avoided emissions is not given for CO<sub>2</sub> the capture of which has already received an emission credit under other provisions of law.*” Electrochaea interprets this to refer to EU Emissions Trading System (ETS) directive which is also under review. In the ETS review proposal, it is indicated that the entity responsible for capturing the CO<sub>2</sub> is responsible for the accounting of the emissions related to this CO<sub>2</sub> and is thereby subject to surrendering ETS allowances for it.

The link between the review of RED and ETS should be more clearly stated with respect to use of CO<sub>2</sub> for production of renewable fuels. The CO<sub>2</sub> used for the production of the fuel should be deemed “carbon neutral” for REDII/REDIII purposes, regardless of whether the renewable fuels are considered to be RFNBOs or RCFs under the Renewable Energy Directive.

We expect that emission savings of at least 70% are only possible if the carbon dioxide has already been accounted for under ETS, or if the CO<sub>2</sub> is derived from a biological source and that hydrogen produced with renewable energy is considered neutral for the emissions accounting. Some uncertainty can be removed if the Commission states in the upcoming delegated act on RFNBO and RFC the methodology to account for GHG emissions on these fuels.

**D. The energy content of methane from renewable resources and fossil natural gas should be included in Annex III of the RED directive.**

Electrochaea asks the Commission to publish the energy content for methane from renewable sources and fossil natural gas in a revised Annex III of the RED directive. The lack of this information will hinder the implementation of Article 22a which is important for

mainstreaming renewable energy in the industry. Fuels, such as e-methane, can be widely used in the industry to replace fossil natural gas and enable European industries to operate within the renewable standards.

Thank you for the opportunity to provide our input about the role of renewable fuels in the zero-emission economy.

Sincerely,

A handwritten signature in black ink, appearing to read 'Mich Hein', with a horizontal line extending to the right.

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