

## Low carbon fuels must have a clear definition to become a complementary pathway to renewable fuels deployment

### Summary

Following the adoption of the new hydrogen & gas package, the European Commission is to work on a delegated act “specifying the methodology for assessing greenhouse gas emissions savings from low carbon fuels” (LCFs), as the implementation step of Article 8 of the recast hydrogen & gas Directive. CO<sub>2</sub> Value Europe, as the European Association representing the Carbon Capture and Utilisation (CCU) community in Europe, insists LCFs must have a clear definition to become a complementary pathway to renewable fuels deployment.

### We call on the European Commission to:

- Clarify whether the definition of low carbon hydrogen and low carbon fuels differ according to end-use sectors (e.g. ReFuel EU aviation).
- Distinguish in EU legislations RFNBOs and LCFs, e.g. in potential quotas, to ensure that both can contribute in decreasing emissions in hard-to-abate sectors, while considering the specificities of their value chains.
- Whether for RFNBOs or LCFs, existing EU rules should be adapted so that official EU targets are met (REDIII targets, GHG emissions reductions in FuelEU Maritime, mandatory synthetic fuels targets in ReFuelEU Aviation), by allowing unavoidable process emissions to continue to be valorised in fuels after 2040.

### About CO<sub>2</sub> Value Europe

CO<sub>2</sub> Value Europe is the European Association representing the Carbon Capture and Utilisation (CCU) community in Europe and working for the recognition of CCU as an essential pathway to reach EU climate goals in 2030, 2040 and 2050. CCU refers to established and innovative industrial processes that aim at capturing carbon – either from industrial point sources or directly from the air – and transforming it into value-added products such as synthetic fuels, chemicals and building materials.

### Background

While the Renewable Energy Directive defines renewable hydrogen and its derivatives as renewable fuels of non-biological origin (‘RFNBOs’) as well as recycled carbon fuels (‘RCFs’), the recently adopted Directive on internal market rules for renewable and natural gases and hydrogen (‘the Directive’) sets the scene for the adoption of a detailed methodology on how to define low carbon hydrogen and low carbon fuels (‘LCFs’).

Article 2 of the recast Directive says that “‘low-carbon fuels’ means recycled carbon fuels as defined in Article 2, point (35), of [REDII], low-carbon hydrogen and synthetic gaseous and liquid fuels the energy content of which is derived from low-carbon hydrogen, which meet the greenhouse gas emission reduction threshold of 70% compared to the fossil fuel comparator for renewable fuels of non-biological origin set out in the methodology adopted according to Article 29a(3) of [REDII]”. It further says that before Q2 2025, “the Commission shall adopt delegated acts in accordance with Article 83 to supplement this Directive by specifying the methodology for assessing greenhouse gas emissions savings from low carbon fuels”.

ReFuelEU Aviation provides a definition specific to the aviation sector, indicating that “‘synthetic low-carbon aviation fuels’ means aviation fuels that are of non-biological origin, the energy content of which is derived from non-fossil low-carbon hydrogen, which meet lifecycle emissions savings threshold of 70 % (...)”.

RFNBOs benefit from quotas under several EU legislations (REDIII, ReFuelEU Aviation, FuelEU Maritime...) and RCFs as well to a certain extent. LCFs are partly eligible for quotas under a different definition for ReFuelEU Aviation, and fully eligible under FuelEU Maritime to contribute to GHG emissions reduction targets, but do not benefit from a dedicated quota. They will however play an important role in decreasing emissions in hard-to-abate sectors in particular, including for the part of RFNBOs production that cannot comply with renewability criteria.

***Building a clear and fit-for-purpose definition for “low carbon hydrogen” and “low carbon fuels”***

LCFs can mean very different things to different stakeholders: they can be fuels made from low carbon energy (e.g. nuclear), they can be hydrogen based on fossil fuels with carbon capture and storage, they can be the part of fuels that are not considered ‘fully renewable’ under the REDII Delegated Acts but that still reach very low levels of carbon emissions. And as a CCU community, we consider it is absolutely crucial to inform value chains and provide clarity and perspective on what falls into the LCFs definition and what does not.

With the Commission starting to work on a delegated act on LCFs, the CCU community considers as crucial to get those definitions right, and to make them consistent with other rules applicable for RFNBOs.

This is why we make the following recommendations to EU legislators:

- We unequivocally ask the Commission to ensure clarity in the definitions used, and to provide legal certainty on whether the LCFs definition as per the Directive should be understood differently compared to the definition of low carbon aviation fuels under ReFuelEU Aviation. In the latter legislation, the definition of “low carbon hydrogen for aviation” excludes fossil sources, while in the former, it does not. We believe it is crucial the Commission brings consistency and streamlines those nuances in a future delegated act, to provide stakeholders with legal certainty on definitions.
- We strongly encourage the Commission to ensure transparency and equivalence in terms of rules while aiming for simplicity and coherence to assess the GHG emission savings for RFNBOs and LCFs, in order to help create clarity in the market.
- Recycled Carbon Fuels (RCFs) have been defined and regulated under REDII and REDIII, even though they technically do not qualify as renewable fuels. Under the gas package, RCFs are defined as low carbon fuels. While seemingly no further legislative work is required for RCFs under this delegated act, it could be an opportunity to ensure that the role of RCFs is properly recognised as contributing to decreasing emissions in Europe, and to pay particular attention that no unnecessary additional burdens are created for the certification of RCFs. For example, under the current EU rules, RCFs that valorise CO cannot replace displaced electricity with renewable energy PPAs.
- We urge the Commission to reflect on the need to adapt its rules on the carbon sources that can be considered as avoided to ramp up the production of sustainable fuels, for example around the 2040 sunset clause on unavoidable process emissions to ensure the deployment of CCU fuels in general in sectors that are hard-to-electrify.
- We encourage the Commission to create distinct quotas for RFNBOs, RCFs and LCFs to ensure that all can contribute in reducing emissions in hard-to-abate sectors, while considering the specificities of their value chains.
- We encourage the Commission to clarify whether the future rules for accounting CO<sub>2</sub> captured from an ETS installation and used to produce RFNBOs will also apply for LCFs.

**Low carbon fuels can act as a complementary pathway in addition to the deployment of renewable fuels. But to avoid confusion and fragmentation within the internal market, LCFs should be clearly and consistently defined at EU level, legal certainty should be provided to stakeholders on which fuels are eligible or not to reach mandatory synthetic fuels targets, and additional rules should be adopted swiftly to complete the EU regulatory framework for CCU fuels in general, e.g. accounting under ETS.**