

28 November 2022

Low carbon hydrogen is not equivalent to renewable hydrogen.
That is why Europe needs strict GHG emissions calculation method for low-carbon hydrogen.

Dear Members of the European Parliament,
Dear EU Member States' Energy Attachés,

The current energy and climate crises call for transitioning to a resilient and sustainable energy system with renewables at its core. **To meet the REPowerEU goals, we need a revised Gas Package that is fit for purpose**, helping integrate renewable hydrogen in the EU gas market in priority sectors, reducing greenhouse gas (GHG) emissions and reaching climate neutrality.

The signatories of this letter support renewable hydrogen as the only sustainable and compatible solution to reach EU's climate and zero pollution goals and decarbonise hard to electrify sectors such as existing hydrogen consuming sectors, heavy industry, aviation, and shipping. This calls for additional renewable electricity capacity to complement renewable-based electrification in heating, transport, industry, to effectively decarbonise and for integrated planning for electricity and gas networks.

However, the Gas Package also promotes the uptake of low carbon hydrogen. Yet not all hydrogen types are equivalent. Before considering hydrogen as a solution, one should not forget that hydrogen is currently a problem in climate change and deepens our dependency to imported fossil fuels. Investors and project developers need clarity, as early as possible, on the hydrogen production pathways and their respective true environmental footprint to be able to make fully informed choices.

Renewable hydrogen emits no carbon emissions. The current lack of clear GHG emissions saving calculation methodology for low carbon hydrogen creates unfair conditions at the expense of renewable hydrogen. This can also deeply undermine the EU's decarbonisation efforts, for unregulated low-carbon hydrogen can emit more GHG emissions than directly burning fossil fuels¹ and current carbon capture and storage (CCS) systems with which fossil-based hydrogen would be coupled to be considered "low carbon" still shows limited performances.

The signatories of this letter call for a clear and strict GHG emissions saving calculation methodology for low carbon hydrogen, especially when produced with steam methane reforming from fossil gas coupled with CCS, to ensure full transparency on their environmental footprint and contribution to the EU's climate goals. Such a definition should comply with a 70% GHG emission reduction threshold, relative to a 66 gCO₂eq/MJ² fossil fuel comparator, based on:

- **a full life cycle approach**, to tackle harmful upstream emissions from the production of fossil-based hydrogen.
- **a maximum methane leakage rate**, for methane leakage has a global warming potential 84 times stronger than CO₂ over 20 years.
- **a minimum carbon capture rate** to avoid substantial amounts of carbon being released into the atmosphere, when applicable.

These rates must be set at the most ambitious levels as put forward by the International Council on Clean Transportation (ICCT)³ and other research⁴.

We trust you will share our view on the critical importance of setting fit-for-purpose policies to deliver the REPowerEU and Paris Agreement goals. Europe can lead the world by example by establishing a clear GHG emissions saving calculation methodology for low-carbon hydrogen based on sound principles that deliver for investors and the planet. This opportunity should not be missed.

Yours sincerely,

Co-signatories:

¹ ["How green is blue hydrogen?" Howarth, Jacobson, 2011. Energy Science & Engineering](#)

² [JRC, 2017 - Solid and gaseous bioenergy pathways: input values and GHG emissions](#)

³ [Gas definitions for the European Union: Setting thresholds to reduce life cycle greenhouse gas emissions \(theicct.org\)](#)

⁴ <https://pubs.rsc.org/en/content/articlelanding/2022/se/d1se01508g>

