

Brussels, 2 April 2024

To European Commission Executive Vice-President Maroš Šefčovič
To Energy Commissioner Kadri Simson

Only a robust low-carbon hydrogen definition will reduce emissions and increase security in Europe

Dear Executive Vice-President Šefčovič,
Dear Commissioner Simson,

Industry, environmental NGOs and think tanks come together to call on you to adopt a robust definition for low-carbon hydrogen in the upcoming delegated act (DA) pursuant to article 8 of the Hydrogen and Decarbonised Gas Market Directive, after thorough consultation of stakeholders.

Evidence shows that renewable hydrogen is the most sustainable and compatible solution to decarbonise hard-to-electrify industry, aviation, and shipping, and help reach the EU's climate, energy security, and zero pollution goals. However, since the Gas Package also aims to provide a legal framework for low-carbon hydrogen, it is crucial to regulate it well for not all forms of hydrogen are equivalent.

We are deeply concerned by calls to adopt a “quick” low-carbon hydrogen definition, which would fall short of being fit for purpose and aligning with the mandate given by the Hydrogen and Gas Decarbonisation Directive. Article 8 of the Gas Directive lists several complex issues that will require novel regulation and cannot be done quickly. A robust definition is crucial to provide market players with investment certainty, ensure a true level playing field with renewable hydrogen, and guarantee that low-carbon hydrogen contributes effectively to climate mitigation efforts, rather than hampering them. Only through a transparent process that puts scientific knowledge at the forefront can we make sure that so-called “blue hydrogen” serves as a meaningful tool for climate action.

In December 2023, the European Parliament and Council agreed on clear building blocks to define low-carbon hydrogen. These should now be substantiated in the upcoming DA with concrete, measurable proposals, for only what gets measured gets done.

The following elements should be included in the upcoming low-carbon hydrogen Delegated Act:

- **Definition of the main hydrogen production pathways**, including hydrogen made with electricity from the grid, nuclear power, fossil fuels, but also hydrogen derived from renewable electricity that is only partially compliant with the RFNBOs DA. Defining the latter is crucial to enable optimal utilisation of electrolysers and minimise the production cost of renewable hydrogen.
- **Full lifecycle climate warming emissions assessment based on real world data** to measure the footprint of low-carbon hydrogen and deliver genuine emissions reduction of at least 70% compared to the fossil fuel comparator established in the Gas Directive.
- **Minimum carbon capture and storage (CCS) rate** based on actual CO₂ captured and sequestered to avoid substantial amounts of carbon continuing to be released into the atmosphere when hydrogen is produced¹, **as well as a maximum methane leakage**

¹ Independent scientific studies show that higher CO₂ capture rates will be essential to reduce the burden on CO₂ removal from the atmosphere, that capture rates of up to 90% is not found to be optimal, and that capture rates of up to 98% is not only needed but also possible at a relatively low marginal cost. See sources [1] and [2].

rate. Indeed, methane leakage has a global warming potential 84 times stronger than CO₂ over 20 years. CCS rates should gradually be increased over time to ensure full compatibility with carbon neutrality goals and avoid carbon lock-ins.

- **Accurate and transparent emissions monitoring and verification system by an independent third-party**, from point of capture through permanent sequestration, to ensure that reported data corresponds to real-world data, rather than relying on (national) averages. While the DA should make clear links with the requirements laid down in the EU Methane Regulation, data from specific gas assets will only be gathered from 2027 and it will take time before these are publicly available. The DA should make sure that strong monitoring and verification requirements apply from its entry into force. Monitoring hydrogen leakage will also be important to maximise its climate benefits.

Additional safeguards should be included in the low-carbon hydrogen definition to deliver genuine emissions reductions and avoid undermining the security of Europe:

- **Introduce a clause ensuring that low-carbon hydrogen made from fossil fuels is only made from existing (non-additional) gas production capacity.** Low-carbon hydrogen must not deepen Europe's fossil fuel dependency. It must align with the phase-down trajectory outlined in the [EU's 2040 climate targets impact assessment](#).
- **Prohibit carbon offsetting** to demonstrate compliance with the low-carbon hydrogen DA and current emissions reduction threshold of at least 70%, or any future threshold. Offsetting schemes can prove unreliable and it is essential to ensure emissions reductions are achieved in the actual production of hydrogen.

We urge you to include these principles in the forthcoming low-carbon hydrogen Delegated Act and **ensure a thorough public consultation for science-based, informed, and balanced policymaking.**

We trust you share our view on the critical importance of ensuring a true level playing field with renewable hydrogen and safeguarding the integrity of EU legislation, avoiding loopholes and carbon lock-ins that might inadvertently exacerbate the climate crisis, and undermine the security of Europe.

