RENEWABLE HYDROGEN PRODUCTION: THE NECESSARY NEUTRALITY

Renewable hydrogen is called to play a massive role in the decarbonization of the EU economy, driven by Fit for 55 policies and targets and the recently renewed ambition to decrease dependency from Russian oil and gas, as part of the REPowerEU plan. We, signatories of this letter, firmly stand behind the ambitious but not least vital objective to produce 10 million tons per year of renewable hydrogen within the EU by 2030.

Nonetheless, when setting the targets to promote the use of renewable hydrogen and its derivatives (e-ammonia, e-methanol, e-kerosene ...) to decarbonize the transport and industry sectors, only RFNBOs (Renewable Fuel of Non-Biological Origin i.e. produced from water electrolysis) are considered in the recast of Renewable Energy Directive (EU) 2018/2001.

Yet, other complementary pathways exist, notably producing hydrogen through the thermochemical conversion of biomass, and strictly limited by the compliance with the list of feedstocks set out in Annex IX and sustainability criteria set out in Article 29 of Directive (EU) 2018/2001, as rightly acknowledged by the European Parliament in the RED3 text adopted on 14th September 2022 (Article 2 – 47ac).

While this “RFNBO only” approach will require massive additional quantities of renewable electricity (approx. 550TWh), considering hydrogen produced using sustainable biomass will reduce pressure on the whole electricity system, both on the availability of the resources and on the prices.

By unlocking circular economy models at the local level, the production of renewable thermochemical hydrogen would allow to value co-products and wastes of biomass which don’t meet other economic and energy outputs, including for the production of other advanced biofuels. Additionally, developing the production of hydrogen from sustainable biomass is strategic to facilitate the development of some diffuse final uses like road and offroad transport, notably by diminishing the related local and regional infrastructure needs (electricity grid or hydrogen pipelines, and storage).

Finally, given the diversity of the energy systems within the EU, a monolithic approach on the relevant renewable hydrogen production pathways puts at risk the achievement of our collective ambition on hydrogen, or at least its achievement in a cost, timely and carbon optimal way.

The level of ambition rightly stated by the EU on renewable hydrogen calls for mobilizing all the levers that are at our disposal. RFNBOs and renewable thermochemical hydrogen constitute complementary solutions to massify a competitive domestic hydrogen production and develop the final uses, adapting to the diversity of territorial constraints within the EU and the Member States.

The EU must be able to produce at least 50% of the renewable hydrogen it needs, and Member States must be given the option to become self-sufficient with renewable hydrogen that is locally produced in a sustainable and cost-effective way, with a focus on greenhouse gas emissions rather than on a technology.
Acknowledging the complementarity of different renewable hydrogen production pathways in the European legal framework will benefit to the European energy security and contribute to the resilience and diversification of our energy supply.

For this reason, we strongly invite the Commission, Council and European Parliament to take into account renewable thermochemical hydrogen to fulfill binding hydrogen targets in industry and transport in the coming trialogues.

Signatories