HYDROGEN EUROPE RESEARCH'S VIEW ON THE EUROPEAN PARLIAMENT VOTE ON THE REVISION OF THE RED II DIRECTIVE

On Wednesday, September 14, the European Parliament adopted its position on the revision of the Renewable Energy Directive (RED II). The revision aims at strengthening the objectives of renewable energy deployment, in line with the new ambitions of the European Union in terms of renewable fuels of non-biological origin (including hydrogen and its derivatives).

During the plenary session in which the Report was adopted, the Parliament voted in favour of an amendment setting criteria for the production of renewable hydrogen. These criteria differ from the ones proposed by the European Commission's delegated act. Whereas the amendment removes some constraints that would have hindered the development of renewable hydrogen, such as the limitation of electricity sourcing from new and unsubsidised renewable fields, there are some aspects that Hydrogen Europe Research would like to comment on, specifically the risks induced by loosening the hourly temporal correlation between the renewable electricity generated and the electricity used to power an electrolyser.

Ensure positive climate impacts

With this amendment, the maximum time gap between renewable electricity production and hydrogen production by electrolysis is extended to a quarterly basis (3 months) instead of a monthly and then hourly correlation after 2030. Thus, it makes it possible for hydrogen to qualify as "renewable" if, at some point in the quarter, renewable electricity has been injected into the grid. Regarding recent technologies and practices in many EU Member States, this means that the electricity used to supply an electrolyser may not necessarily be renewable over a significant portion of the quarter. Instead, the "renewable" hydrogen will be produced with the electricity available in the grid during the quarter, potentially mainly generated from fossil fuels. From the viewpoint of Hydrogen Europe Research this amendment, if acknowledged in the Trilogue, will not incentivise further research and innovation activities in storage technologies. These activities are much needed to ensure that renewable electricity use is tightly linked to the production of renewable hydrogen, and further promote the resilience of the energy system If this is not the case, with this amendment, the EU runs the risk of producing "renewable"-labeled hydrogen which is renewable only by name.

The loophole introduced already exists in practice in the certification scheme of electricity. The risk of not implementing an hourly temporal correlation is that the carbon footprint of this “renewable” hydrogen could be greater than the hydrogen produced via current processes using fossil fuels. This will make hydrogen irrelevant in reducing our greenhouse gas emissions, which is its primary interest.

Keep hydrogen production affordable

The European ambition is to use hydrogen in hard to abate sectors such as industry applications (primarily steel, chemicals) and heavy mobilities. To achieve this, financial support mechanisms are envisaged, the amounts of which will depend on the production costs of hydrogen.

However, if renewable hydrogen was to be produced only when electrolysers receive renewable electricity from the network, this would require adapting the load and/or power of the electrolysers to the production of renewable electricity, and reduce their utilisation rate, resulting in lower full load hours and raising hydrogen production costs. To ensure affordable hydrogen costs as of today, Hydrogen Europe Research calls to support additional research efforts to improve electrolyser efficiency but also to consider the usage of low-carbon electricity as essential to maintain a high utilisation rate of electrolysers, de facto keeping the costs of renewable hydrogen competitive.

Thus, Hydrogen Europe Research supports the RepowerEU approach considering the complementarity of renewable and low-carbon hydrogen to achieve the European hydrogen targets. This will keep hydrogen production affordable while avoiding the previously mentioned loophole.

Capitalise on the European supports in research and in the industrialisation of hydrogen technologies

Finally, the European Parliament rejected an amendment that would have aligned the production criteria for imported hydrogen with those enforced in the European Union. In doing so, it jeopardises and minimises the impact of the long-lasting European efforts in research and industrialisation of hydrogen technologies and its current leading position globally.

Allowing relaxed constraints for imported hydrogen compromises the emergence of a strong European hydrogen industry and research ecosystem, at a time when the geopolitical situation reminds us of the strategic importance of our energy sovereignty.

Hydrogen Europe Research

Hydrogen Europe Research calls for aligning the constraints for domestic and imported hydrogen ensuring a fair competition and effective climate positive impacts of renewable hydrogen.

To reach Europe's climate objectives while limiting its energy dependence and supporting the European leadership of its industry and research, it is important to ensure that the rules to be agreed by the Trilogue for producing renewable hydrogen rely on a level playing field for all producers and are based on technical considerations.