

REALISTIC REGULATORY FRAMEWORK NEEDED TO FAST-TRACK EU HYDROGEN INVESTMENTS

Hydrogen Cluster Finland, representing over 50 Finland-based companies and industry associations, calls EU decision-makers for swift action to unleash the investment potential of the emerging European hydrogen economy.

Hydrogen offers significant opportunities to support EU's dual goals of drastically reducing emissions across various sectors while at the same time responding to the urgent need to increase self-sufficiency in energy.

Time to act is now. EU institutions are currently debating a complex and comprehensive set of directives and regulations that will define the investment opportunities for industry. H2 Cluster Finland calls for a regulative framework that is fit-for-purpose and includes minimum red-tape. Regulatory criteria must be self-explanatory and create sound basis for investments.

EU commission's REPower EU communication highlights the role of a significant and accelerated hydrogen and integrated infrastructure development already by 2030 to improve the resilience of European energy system.

Hydrogen Cluster Finland has identified three recommendations that will support creating a business environment that enables fast-tracking investments.

1. EU should maximise potential for domestic investments by further accelerating uptake of renewables

Unlocking the opportunities of clean hydrogen is essentially tied to the good availability of reliable, low-cost, clean electricity. Increasing EU's self-sufficiency in energy, requires fast-tracking renewables projects, especially in wind energy. EU institutions have called for simplified regulatory processes to speed-up e.g., permitting procedures for wind parks. All bottlenecks, both at EU and national level, should be identified and measures taken to speed-up processes.

- In Finland, currently, average planning & permitting time for a new wind-park investment is approximately 5-8 years.

While boosting renewables is essential, tying green hydrogen development to extremely complex rules on additionality and temporal & geographical correlation will hinder investments. The fact that the EU Commission has still not issued delegated acts on "additionality" and "GHG savings" is delaying investors of knowing the real "rules of the game".

While EU will be relying on non-EU countries for hydrogen imports, the domestically produced hydrogen targets have doubled from 5.6 Mt to 10.6 Mt by 2030 in the REPower EU proposal. Thus, it is important we consider all domestic opportunities in the single market with priority. EU countries that already have a largely decarbonized grid mix possess no risk of increased GHG emissions resulting from increased electricity demand. Hydrogen produced from decarbonized electricity in the EU also delivers highest environmental impact as the emissions from imports will be lower.

[Finland](#) offers a case in the point: the emissions of the Finnish grid electricity are already at a low level ([71 gCO₂/kWh](#)), and in the country there are over 150 GW of additional cost efficient wind power investment opportunities identified. This could produce over 300 TWh of clean hydrogen for EU consumption. How much could we accelerate the investments with focused actions?

2. The role of Low-Carbon hydrogen must be recognised and rewarded

While green hydrogen based on renewable wind & solar power is promoted, Hydrogen cluster Finland requests that **all forms of CO₂-free electricity need to be used to produce hydrogen cost-efficiently.**

Where sufficient sustainability criteria for electricity production can be secured, such as the required minimum -70% GHG saving of grid-based electricity, low-carbon hydrogen produced with such electricity should be recognised and rewarded.

EU should recognise the use of low-carbon hydrogen in reaching EU's ambitious goals of using RFNBOs in both industry and transport. Incorporating low-carbon hydrogen in to REDIII would significantly reduce cost of compliance with the set targets, support reaching EU's climate targets and accelerate investments.

Therefore, clean hydrogen produced both from renewables and low-carbon electricity sources as well as with carbon capture utilization and storage (CCUS), or the production of hydrogen via pyrolysis capturing the carbon in solid form (turquoise H₂) should be allowed to contribute to the achievement of the climate targets. Significant investments are made into blue and turquoise hydrogen which supports reaching EU's climate goals. EU should also create appropriate recognition for BECCS as capturing biogenic CO₂ has potential for carbon negative products, i.e., long term storage of CO₂ of biogenic origin in the products. Furthermore, the recognition for the allowed use and/or storage of the solid carbon extracted from the (bio)methane should be clarified in the appropriate parts of the regulation.

3. Adequate infrastructure and sufficient investment support must be secured

Infrastructure is a key requirement for a functioning EU energy market and necessity for the development of EU hydrogen economy. Transport of hydrogen and hydrogen-based products within the EU will require significant investments.

Accelerated development of integrated infrastructure, i.e., electricity, hydrogen, and gas transmission, as proposed in REPower EU, is crucial for unlocking the potential for large scale hydrogen production, renewables deployment and creation of hydrogen-based new value chains such production of green steel, synthetic fuels, and chemicals.

Hydrogen pipeline transmission of hydrogen can facilitate the creation of a regional, national, and eventually a European hydrogen market as it can connect several producers with several end-users. This decreases the off-take risk of hydrogen producers and price risk of hydrogen users as the infrastructure can create competition through an open and accessible market. In addition, as speed is crucial for development and acceleration of hydrogen scaling, efficient permitting of large-scale critical infrastructure projects should be prioritized, both electricity and hydrogen.

EU Commission and member states have created support mechanisms to boost clean hydrogen investments. However, to create sufficient investments in the required magnitude, further investment funds should be considered, the application processes should be streamlined, and increased focus be put on the “new energy reality”. Reducing dependence on Russian energy sources will require adjustments to the EU’s internal market. Funds should consider the new reality and focus on system-integration. A holistic approach to identify bottlenecks hindering true system-integration is required.

Hydrogen Cluster Finland is committed to support EU in reaching the demanding climate goals by becoming carbon neutral by 2050. Hydrogen Cluster Finland is also committed to supporting Finland to become carbon neutral by 2035. The road to this goal requires immediate action and impeccable collaboration between EU institutions, member states, industry, and the civil society. Hydrogen Cluster Finland with the member companies call for intensified collaboration and we are available for further discussions.

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