Subject: For its smart sector integration strategy and Clean Hydrogen Alliance and Strategy, the EU must focus on (lead markets for) sustainably produced, renewable hydrogen.

Dear Vice-President Timmermans,
Dear Commissioner Simson,
Dear Commissioner Breton,

Discussions on the future role of hydrogen are heating up in Brussels. As environmental groups, we would like to share our views on the EU’s approach to hydrogen and the role it can play in helping the EU deliver on its commitments under the Paris Agreement and transition to an energy system based on energy efficiency and renewables.

The European Commission is working on a Clean Hydrogen Strategy to define the future role of this energy carrier. A Clean Hydrogen Alliance was announced that will identify the needs of the hydrogen sector to contribute to the EU’s climate-neutrality. Such an alliance is not the first of its kind. Already in 2017, the previous European Commission launched the EU Battery Alliance, which has established principles for a sustainable battery supply chain and has helped a number of concrete projects or ‘gigafactories’ to get off the ground. The Clean Hydrogen Alliance and Strategy must draw on the lessons learnt from the EU Battery Alliance.

Drawing inspiration from the Battery Alliances’s singular focus, renewables-based hydrogen production must be at the heart: Any Clean Hydrogen Strategy/Alliance must be first and foremost a strategy to deploy and integrate more renewables. The EU can already build on the technological leadership of European industry in key aspects of the clean hydrogen value chain (e.g. offshore wind farms, electrolysers, etc.). To support European industry to expand its competitive advantage, the Clean Hydrogen Alliance and the related EU industrial policies must remain focused on one goal: beating expectations and making renewables-based hydrogen production cheaper than its alternative (fossil) production methods by 2030. With this in mind, fossil fuel-based hydrogen coupled to carbon capture and storage is a distraction from this important goal and should not receive public support.

Why this singular focus? Worldwide, countries will be ramping up action to meet their commitments under the Paris Agreement, likely by adding more wind and solar to their energy mix. Increases from a low share of renewable electricity is unlikely to present much of a challenge, but the European industry can lead the way in developing the solutions for grids and energy systems that need to integrate high shares of variable renewable electricity sources. If put into practice within the EU, smart sector integration can become a major export opportunity for European manufacturers.
How can the development of renewable hydrogen be supported?

Initially, the volumes of renewable hydrogen will be small and the price high. This is why the Commission and its European Green Deal should identify lead markets for renewable hydrogen, channeling this product to those sectors where direct use of renewable electricity is not feasible and where - over time, by 2030 - hydrogen will gradually increase its role. In the transport sector, shipping and aviation are obvious candidates for such lead markets, given their enormous energy demand and lack of clean fuel alternatives. Energy intensive industries needing high density energy carriers such as steel, chemicals and cement are other examples. Infrastructure planning will be key to prioritize hydrogen use in these select industries and clusters. Hydrogen produced from renewable electricity could also contribute to grid balancing. Longer-term seasonal storage is another sector where hydrogen can shine. It will take time for these industries to develop the new infrastructure, production processes, etc. to use hydrogen. Adapting fossil gas grids to transport initially fossil, later renewable hydrogen to sectors, where alternatives exist, would be a distraction. A general binding EU-level target for hydrogen - be it produced from renewables or fossil gas with carbon capture and storage - will fail to stimulate renewables-based hydrogen and channel it specifically to those sectors for whom hydrogen is the only option. Hydrogen is not an option for heating in buildings: Efficiency rates are poor and H2-methane blending would only lock in the fossil gas grid and compete with the renewables-supplied electrification of heating and with district heating. Similarly, promoting the use of hydrogen in cars and vans plus the accompanying refueling infrastructure will distract from and compete with the roll-out of charging infrastructure for electric vehicles.

Secondly, a nascent hydrogen industry in Europe will need a robust sustainability framework for clean, renewable hydrogen. The revised Renewable Energy Directive already sets ground rules for renewable hydrogen as a Renewable Fuel of Non-Biological Origin. Additionality is key: hydrogen production must add to new renewables deployment or add to financing of additional wind, solar and other renewables. Competition with the decarbonisation of the power sector must be avoided at all cost. A stringent life-cycle-assessment of hydrogen production is crucial: A sustainability framework - for transport fuels, but also for the use of hydrogen in specific sectors - that draws on these principles, will play to the strengths of European industry and enhance its position in the global race to be the first to deliver cheap renewable hydrogen.

Yours sincerely,

Transport & Environment, E3G, BBL, ECOS, Carbon Market Watch, Natuur & Milieu, EEB, Global Witness

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