RGI calls for a robust assessment of renewable hydrogen production and use

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At the EU and national level, hydrogen is being included in decarbonisation strategies, and it is often presented as the sustainable replacement of fossil fuels and especially gas in all of its applications.

On occasion of the REPowerEU Plan, the European Commission has proposed to increase the targets for renewable hydrogen. According to this, the European Commission suggests the production of 10 million tonnes of renewable hydrogen within EU borders and imports of another 10 million tonnes by 2030. Such massive production and use requires due consideration, in order not to lead to higher greenhouse gas emissions, increased prices for consumers, waste, import dependency and environmental impacts.

RGI wants to stress that renewable hydrogen will play a role in hard-to-abate sectors, as feedstock and as an additional flexibility source for the electricity system, but it is not a silver bullet, rather a complementary element for the energy transition. For hydrogen to be considered renewable, it must be ensured that the production facilities are operated simultaneously when there is additional renewable electricity generation in the electricity system. Otherwise, hydrogen production would end up redirecting renewable electricity from more efficient uses, increasing fossil fuel consumption, electricity prices and GHG emissions.

RGI strongly believes that direct electrification should always take precedence, while renewable hydrogen could play a role in some hard-to-abate applications and for long-term storage purposes. Renewables-based direct electrification allows for significant efficiency gains across the entire energy system. Through a more direct deep electrification, primary energy can be saved. It is therefore essential that renewable hydrogen production, which is instead associated with energy losses and inherent inefficiencies, follows a robust assessment of when, where and by whom it is really needed and where it is produced. An oversized transition to hydrogen would entail the risk of high costs for consumers and stranded assets, among others. The energy efficiency first principle and acceleration goals should be applied when designing policies and support schemes across the entire energy system.

Renewable hydrogen can contribute to system security, but it should be considered as one element of many. Flexibility is strongly and increasingly required in a system which is based largely on variable renewable energy sources, especially wind and solar. Hydrogen can provide flexibility services, but its application should be secondary to other flexibility options that are more suited to meet short- and medium-term system needs.

RGI acknowledges that scarcity is becoming the new normal. Planning renewable hydrogen production, as well as other alternative technological applications, should therefore be done with resources and space availability in mind. In Europe, we observe rising conflicts over use of space, and new energy infrastructure is

competing with settlements and the protection of nature, biodiversity and landscapes. This also holds true for other places around the world, which are facing their own environmental and societal specificities, also related to their decarbonisation pathways. Due to the inherent losses in all conversion processes, including hydrogen, we should consider how much space, water and other resources are needed to produce energy, and optimise the selection of fuels accordingly. We therefore consider the European Commission's domestic renewable hydrogen production and import targets as too ambitious for 2030 and putting at risk the gains of direct electrification. A careful assessment of availability and costs within the EU should be carried out. Moreover, imports of hydrogen should not lead to new dependencies, cost externalisations and environmental and social impacts in producing countries.

Taking all this into account, we ask the European Commission, European Parliament, and Member States to carefully consider the means of the implementation of the renewable hydrogen target set in the REPowerEU Plan. To provide a sound and just hydrogen production and use in the European Union, all scenarios by the European Commission, ACER and the ENTSOs should include all sustainability considerations: 'energy efficiency first' principle, space and water availability for electricity generation, and its conversion to other carriers. In line with this, all scenarios should comply with climate, biodiversity, and energy security targets.

About RGI

RGI is a unique collaboration of NGOs and TSOs (Transmission System Operators) from across Europe engaging in an 'energy transition ecosystem-of-actors'. We promote fair, transparent, sustainable grid development to enable the growth of renewables to achieve full decarbonisation in line with the Paris Agreement.

RGI Members originate from a variety of European countries, consisting of TSOs from Belgium (Elia), Croatia (HOPS), France (RTE), Germany (50Hertz, Amprion, TenneT and TransnetBW), Ireland (EirGrid), Italy (Terna), the Netherlands (TenneT), Portugal (REN), Spain (Red Eléctrica de España) and Switzerland (Swissgrid); and the NGOs BirdLife Europe, Climate Action Network (CAN) Europe, France Nature Environnement (FNE), Friends of the Earth Ireland, Fundación Renovables, Germanwatch, Legambiente, NABU, Natuur&Milieu, the Royal Society for the Protection of Birds (RSPB), WWF International and ZERO. Europacable is a Supporting Member.

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