

## **Three recommendations on how to build a successful international green hydrogen market**

Green hydrogen and its derivatives are key to decarbonising the global economy and keeping the Paris goals within reach. According to the IEA Net Zero Emissions Scenario, 520 Mt low-carbon hydrogen will be needed globally by 2050 to stay within the 1.5°C temperature goal. In 2021, however, global hydrogen demand only accounted for about 90 Mt and was almost completely fossil-based.

The Russian war against Ukraine has resulted in a severe energy crisis causing prices for gas and electricity to skyrocket. This crisis highlights the vulnerabilities of the current fossil fuel-based economy. Yet, it could also serve as a catalyst for the global energy transition and the replacement of fossil fuels with alternatives such as green hydrogen.

Accelerating the development of a global market for green hydrogen will require more action. The availability of green H<sub>2</sub> on an industrial scale and at affordable prices will determine the prospects of industry decarbonisation in the G7 countries and their ability to lead by example in the necessary global transformation.

The G7 countries are in a good position to address this challenge and create a major pull factor for the hydrogen ramp-up. By 2025, their hydrogen and ammonia generation let alone in the electricity sector needs to reach nearly 200 TWh.<sup>1</sup> By announcing a joint Hydrogen Action Pact (G7-HAP) in May 2022, the G7 ministers have already made important progress in this matter. At EU level, the RePowerEU plan, which includes the goal of reaching 20 Mt of hydrogen by 2030 within the so-called “Hydrogen Accelerator”, as well as the announcement of the establishment of a European Hydrogen Bank, also point in the right direction.

**Germanwatch and Stiftung KlimaWirtschaft wish to contribute to accelerating the ramp-up of a green hydrogen market by joining the perspectives of industry and civil society and making the following recommendations:**

### **First: Finalise strong enabling regulatory frameworks to create demand, mobilise investments, and roll out green hydrogen projects**

Finalising the EU hydrogen framework and agreeing on a definition of green renewable hydrogen are prerequisites for providing investment security to stakeholders of the private sector in Europe as well as in partner countries and thus a requirement for new projects and

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<sup>1</sup> IEA 2021. Achieving Net Zero Electricity Sectors in G7 Members.  
<https://www.iea.org/reports/achieving-net-zero-electricity-sectors-in-g7-members>

investments in green hydrogen. Even though the RePowerEU plan and the promise of a European hydrogen bank are important steps in this direction, final decisions about the regulatory framework and proposals to accelerate the upscaling process need to be made. The same applies for non-European G7 countries: while some progress has been made on developing support schemes for hydrogen production, instruments to make use of the potential market pull of the industry as well as a reliable infrastructure for green hydrogen have yet to be established.

To deliver a functioning regulatory framework in due time, political decision makers need to be more decisive and act faster.

### **Second: Build sustainable and people-centred hydrogen partnerships**

When setting up hydrogen partnerships, two dimensions need to be addressed:

*First*, hydrogen partnerships must be built on sustainability standards and allow local populations and economies to participate and benefit, for example through job opportunities or the creation of local value chains. To develop such people-centred partnerships, it is necessary to make investments in capacity building, agree on mandatory sustainability criteria, and step up funding.

*Second*, when setting up new energy and hydrogen partnerships, the EU and its member states need to consider that potential interdependencies and lock-in risks can only to some extent be alleviated by diversification strategies. This is particularly relevant with regard to partnerships with today's fossil fuel producers. If ignored, EU partner countries and the G7 will have to face conflicts with climate action, human rights, and the sustainable development goals.

### **Third: Prevent a race to the bottom and lead the way forward in international fora beyond G7**

A functioning international market needs to reach beyond the G7. Without a joint definition of the term "green hydrogen" and reliable sustainability standards, the international traceability and tradability of green hydrogen will be limited. It should be a top priority for political decision makers to clarify these issues as partnerships for hydrogen are already being set up without any clear safeguards and certification schemes in place. While a global harmonisation of definitions and standards is unlikely, continuing international efforts towards this end are still important and need to be accelerated. The forthcoming Indian G20 Presidency could provide this space as India has identified green hydrogen as a priority. To provide investment security for the industry as a key client of hydrogen, G7 countries and their partner countries need to collaborate on clarifying the definitions and standards for green hydrogen now.



The EU and its member states have to be open for different approaches and pragmatic solutions and prevent a “race to the bottom”. In line with the vision of the European Green Deal, the EU should lead the way forward by highlighting that the hydrogen market can be green and economically viable at the same time. This way, the green hydrogen business model will become globally replicated and a success story.

**To conclude: Collaborating is key to successfully build up a global green hydrogen market**

Building up a functioning international green hydrogen market will only succeed if all of us work together *now*. Germanwatch and Stiftung KlimaWirtschaft are eager to contribute and join the perspectives of all relevant stakeholders, that is, civil society, industry, politics, and science. At COP27, we need to make progress in developing a common understanding on how we can ensure a sustainable and just green hydrogen market. Moreover, we need to see concrete action from politics, businesses, and civil society in the EU and internationally. This decade is decisive for staying within the 1.5°C limit.

**Background**

*This briefing is based on a discussion at a closed-door event with representatives of governments, industry, think tanks, and civil society, hosted by Stiftung KlimaWirtschaft and Germanwatch on 19 September 2022.*