

# Scale Up Renewable Hydrogen For A Clean Resilient Industry

RHC recommendations for the Clean Industrial Deal

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Europe has rightly adopted a groundbreaking regulatory framework to scale up renewable hydrogen (RH2). Yet the market ramp-up has been slower than expected. The main reasons are:

- Lack of firm offtake demand
- Persisting funding gap between the cost of RH2 and incumbent alternatives
- Pending national implementation of the fit-for-55 package
- Inflation, rising interest rates, and capital costs that hit the business case of projects
- Lack of fit-for-purpose infrastructure for hydrogen but also electricity

While Europe leads on project announcement, its leadership in RH2 is under serious threats. Other regions are catching up. Much more needs to be done in Europe to translate announcements into deployment.

The new European Commission has a unique opportunity to drive the growth of the nascent European RH2 industry into a global powerhouse and should work on an **immediate plan to scale up RH2 in Europe**, leveraging a set of different instruments in the upcoming Clean Industrial Deal and subsequent initiatives. Urgent and bold action is imperative or Europe risks losing the race for future-proof jobs, industries and cleantech.

Translating the EU Competitiveness Compass commitments into action requires alignment and coherence across policies. **While certainty and focus has been delivered on the supply side<sup>1</sup>, it is now crucial to ensure the same coherence on the demand side in the Clean Industrial Deal to ensure tangible progress for the sector and deliver the Renewable Fuels of Non-biological Origin (RFNBO) targets. A technology neutral approach based solely on GHG emissions savings will fail to deliver.** With the right policies and financial support, our sector can build a competitive European industry, secure industrial leadership, and enhance Europe's security and resilience.

See below the RH2 sector recommendations to make the Clean Industrial Deal a success for Europe.

## I. Unlock demand for renewable hydrogen (RH2) and derivatives

1. **Create “green lead markets” for products made with renewable hydrogen** (e.g. cars, buildings, white goods made with green steel, food made with green fertilisers). Without appropriate incentives to increase the demand for RH2, no investment decisions will be taken to expand RH2 production, even if it were subsidised. In the next 12 months, the European Commission should complement the adopted EU legislative framework with measures to support the purchase of downstream end-products across Europe via the creation of “green lead markets” to help deliver the adopted RFNBO targets. Such framework should:
  - Clearly & simply label these products, reflecting their carbon footprint but also differentiate hydrogen production pathways based on legal RFNBOs/ Low-Carbon Fuels definitions. This is key to create a level-playing field and the necessary transparency for offtakers and end-consumers. Article 22a.2 in REDIII should better link with the RFNBO delegated act and avoid fragmenting the EU Single Market.
  - Set a clear preference for RFNBO-made products, via quotas/obligations in public procurement, in taxation (e.g. via tax breaks) or Common Agricultural Policy (e.g. giving farmers a bonus support for using green fertilisers) to help buy sustainable.

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<sup>1</sup> with production rules for Renewable Fuels of Non-biological Origin (RFNBO), the promotion of Power Purchase Agreement (PPA) and Europe Hydrogen Bank.

Ultimately, such a framework should help bridge the cost gap to make green sustainable products cost-competitive with polluting alternatives to not drive prices up.

**Point of caution:** RHC is concerned about the request from some industry players to make the Clean Industrial Deal “technology neutral” and use lead markets as a substitute to binding RFNBO targets. This approach would seriously dilute the RFNBO targets and hinder their ability to direct investments in the intended direction, bringing more uncertainty for investors and end-users. We already have “lead markets” for hydrogen thanks to the adopted RFNBO targets for industry, aviation & maritime sectors. The EU goals of carbon neutrality and energy security cannot be achieved without enforcing a clear distinction between fossil-based and renewable energy solutions in the Clean Industrial Deal. This will need to be done while supporting industrial competitiveness.

## 2. Making Public Funding fit for scaling up

Launching the most mature projects in the pipeline should be a top priority of the European Commission. The European Hydrogen Bank is a first-of-its-kind highly promising tool to do so and should become Europe’s primary financing instrument to deploy industrial-scale projects across Europe with speed and simplicity and bring costs down. To enable this, increasing public funding in this early market phase is crucial.

### ➤ **Maintain the European Hydrogen Bank (EH<sub>2</sub>B) and make it fit to scale up and deliver the RFNBO targets**

- **Keep EH<sub>2</sub>B for RH<sub>2</sub> only.** Do not extend its scope to all decarbonisation solutions. Focus will ensure impact.
- **Increase the EH<sub>2</sub>B budget:** Funnel unspent public funds to complement the (limited) Innovation Fund and **set an auction calendar for the coming years with budget fit to deliver the RFNBO targets.** Our sector needs clear signal/visibility until 2030/2035: Shifting about 42% of today’s hydrogen demand in industry (about 8 Mt/year) would require about €10bn/year, applying an IRA-like support of 3€/kg of RH<sub>2</sub> produced, €15bn/year applying a support of 4.5€/kg. A drop compared to the €600bn spent over importing fossil fuels over the past two years.
- **If the EH<sub>2</sub>B budget cannot be increased, allow cumulation of national and EU incentives (CAPEX and OPEX) to cover the cost gap for a given project**
  - For mature projects, i.e. whose aid has been awarded after scrutiny of a public authority.
  - On a temporary basis (e.g. three years).
  - Cap cumulation to 100% of funding gap to avoid over-subsidisation.

**Why it is important:** Cumulation has so far not been allowed under the EH<sub>2</sub>B, while current state aid rules allow for it<sup>2</sup>. This impediment leaves project developers awarded EH<sub>2</sub>B funding with a difficult choice between EH<sub>2</sub>B funds and other funds secured after lengthy and resource-intensive application processes. Renouncing to granted funding only impedes them to close the funding gap and make projects bankable, as well as delays progress to achieve the adopted EU targets. There should be clear guidelines from the European Commission to facilitate cumulation, help bridge the funding gap while avoiding over-subsidisation and guide the work of project developers and public authorities in funding institutions.

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<sup>2</sup> Section 3.2.1.3.1 of the Guidelines on State aid for climate, environmental protection and energy stipulates that “Aid may be awarded concurrently under several aid schemes or cumulated with ad hoc or de minimis aid in relation to the same eligible costs, provided that the total amount of aid for a project or an activity does not lead to overcompensation or exceed the maximum aid amount allowed under these guidelines. If the Member State allows aid under one measure to be cumulated with aid under other measures, then it must specify, for each measure, the method used for ensuring compliance with the conditions set out in this point”. See also article 8 of the General Block Exemption Regulation (EU) No 651/2014, and article 9 of the Recovery and Resilience Facility Regulation (EU) 2021/241.

- **Drive Member States to use the EH<sub>2</sub>B Auction-as-a-Service** to fund their national RH<sub>2</sub> projects. This will not only accelerate project deployment but also save Member States time and resources, and ensure the same rules apply across the EU Single Market avoiding a patchwork of different support schemes.
  - **Introduce dedicated financial support for offtakers** to help cover the cost of new technologies that consumes hydrogen (e.g. DRI plants in the steel sector). Such support should come from an additional/ dedicated budget from that of supply-side auctions and be eligible to cumulation under EH<sub>2</sub>B.
  - **Prioritise public funding on hard-to-electrify sectors in future auctions**, with a clear link to the RFNBO targets adopted in the revised Renewable Energy Directive, ReFuelEU Aviation and FuelEU Maritime, and to maximise GHG abatement potential.
  - **Factor in inflation/ allow funding indexation**
- **Improve State Aid for Clean Industrial Decarbonisation with renewable hydrogen**
- Favour industrial decarbonisation via electrification (direct and indirect), setting a clear preference for RH<sub>2</sub> over other H<sub>2</sub> types in line with EU H<sub>2</sub> Strategy and EU laws.
  - Maintain eligibility of H<sub>2</sub> to receive state aid in the form of reductions from electricity levies for energy-intensive users (CEEAG, section 4.11).
  - Extend the Temporary Crisis and Transition Framework (TCTF) framework and make it fit for industrial decarbonisation needs in a laser-focused Clean Industrial State Aid Framework prioritising RH<sub>2</sub>, with an application timeline up to 2030, to allow more flexible funding for RH<sub>2</sub> projects and provide long-term visibility for industry to plan their investments and activities.
- **Simplify and speed up application processes and access to public funding** by reducing the administrative burden placed on applicants. For instance, the application process to EH<sub>2</sub>B is still too time and resource-intensive for applying companies, with no guarantee of success. Applications processes should be streamlined anywhere possible. Granted funding also takes too long to be disbursed (e.g., IPCEIs) by public authorities. More flexibility in deadlines to utilise EU funding is needed to avoid project to lose granted funds, which only impedes delivering the adopted EU targets.
- 3. Implement and enforce RFNBO targets:** The European Commission should support Member States in ensuring a quick and harmonised transposition and implementation of the adopted RFNBO targets, notably in industry. Member states should support industrial competitiveness when implementing these targets.

## II. **Unlock access to low-cost renewable electricity** (used to produce RH<sub>2</sub>)

- Accelerate the implementation of the Electricity Market Design (EMD) and the Renewable Energy Directive (RED III). Member State should notably:
- Fully implement the updated permitting rules, introducing the “overriding public interest” concept, and ensuring competent local authorities have adequate resources. Fast and simple permitting should be ensured for RH<sub>2</sub> projects too.
  - Improve accessibility to Renewable Power Purchase Agreements and counter-guarantee them by the European Investment Bank to de-risk offtake.
- Strengthen Europe’s electricity grids, making them fit for direct and indirect electrification by investing massively in electricity transmission and distribution network expansion and modernisation, flexibility, and cross border interconnections, to reduce curtailment, grid connection queues and avoid project delays.
- Lower taxation on renewables (incl. network charges & levies) versus fossil fuels.
- For on-site RFNBO producers procuring electricity from the grid, in this early market phase, design public support schemes covering the rising network costs.

### III. Build fit-for-purpose integrated energy infrastructure for affordable RH2

#### **Hydrogen**

- Roll out timely hydrogen infrastructure fit-for-purpose (prioritising pure hydrogen) and properly sized (based on where the hydrogen demand is)
  - Ensure stronger integrated planning between ENNOH and electricity actors, starting with ENTSO-e to better account for the electrification progress and needs.
  - Offer early clarity on tariffication, trading and infrastructure deployment.
  - Provide de-risking tools such as Member State guarantees in case of infrastructure deployment delays to ensure continued investments.

#### **Electricity**

- Recognise RH2 as a complementary flexibility tool to support electricity grids, build a flexible integrated energy system, and integrate large share of renewables. The European Commission should make proposals to modernise the market design with measures to remunerate electrolyser plants/RH2 for flexibility services provided to electricity grids and build the business case for seasonal flexibility and system benefits delivered to the energy system. This will bring additional revenues firming up the business case for RH2 projects. Such proposals should include fostering locational price signals (including lower connexion fees and grid tariffs) to help place electrolysers in power hubs to avoid curtailing excess renewable electricity that would have not been absorbed through shorter flexibility means term flexibility (batteries, demand side, pumped hydro). Such RH2 plants should be supported to connect to hydrogen pipelines to ship this RH2 to industrial consumption hubs.

### IV. Electrolyser manufacturing: promote jobs and value creation in Europe

- Leverage the resilience criterion for electrolyser (ELY) manufacturing in EH<sub>2</sub>B in national RH2 auctions to avoid relying on one single supply country and promote European value creation. Aligning the Net Zero Industry Act and its implementing act on non-price criteria will be key to avoid creating conflicting standards and legislation, in line with the Competitiveness Compass's call for "Simplicity".
- Level the playing field on the EU Single Market, ensuring reciprocity for global competition via strengthened use of Foreign Direct Investment Regulation, Foreign Subsidy Regulation, International Procurement Instrument, Clean Trade & Investment Partnerships.
- Extend EIB's counter-guarantee scheme to allow ELY manufacturing to help de-risk and instil confidence in more insurance companies and private banks that are currently risk averse to the sector and charge higher premiums as a result.

- V. **Keep legal certainty** for RFNBO production rules, targets, and market design for 2030 and 2035. The European Commission should also set dedicated 2040 RFNBO targets for hard-to-electrify sectors, building on the implementation of the 2030 targets and identified lead markets.

**Ensure a fair competition with low carbon hydrogen.** The upcoming delegated act on low-carbon hydrogen must ensure a level playing field for RFNBOs based on robust requirements for fossil-based hydrogen including:

- net-zero compatibility from the outset by ensuring carbon capture rate tightening in time for investments made today to be carbon neutral in 2050,
- not underestimating upstream emissions from the outset.
- Clear legal safeguards to avoid deterrent impact on the energy system, i.e. deepening Europe's energy dependency, in a similar spirit to requirements to guarantee additional renewables are used for RH2 production and do not drive emissions on the electricity grids.

Calls for pragmatism and speed should not lead to deregulation and/or unfair competition. This would send bad signals for frontrunners in RH2 and undermine Europe's ability to become more energy dependent and resilient.