

Ramping up the renewable hydrogen industry with the European Hydrogen Bank

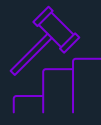
The European Union (EU) recently agreed ambitious and binding targets for renewable hydrogen consumption in industry and transport by 2030. These targets provide predictability for investors and will further stimulate market demand for renewable hydrogen. Coupled with the rules defining renewable hydrogen on the supply side, the EU has delivered key

elements of the legislative framework for renewable hydrogen. We have the stick. Now we need the carrot and the European Hydrogen Bank (EHB) is the EU's answer. A strong EHB will help to accelerate the uptake of renewable hydrogen and electrolyser technology by bridging the cost gap between fossil-based hydrogen and renewable hydrogen.

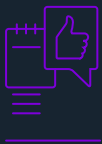
Nel's key input to the EHB's draft terms & conditions:



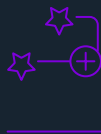
1. A one-stop shop for renewable hydrogen financing



3. Size matters: pilot auction, not pilot projects!



2. Promoting the most robust projects



4. A value chain "Made in Europe"





1. Make the EHB the EU's one-stop shop for renewable hydrogen

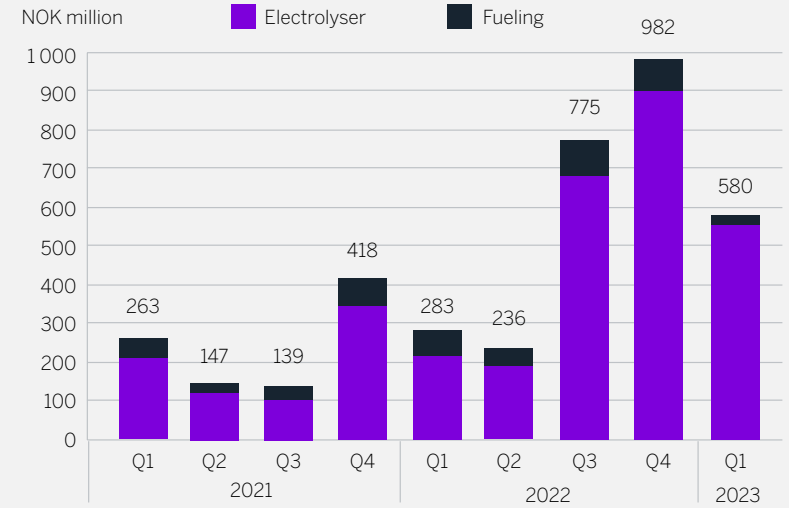
- The EU has too many different funding mechanisms which can create confusion for investors and project promoters. For the sake of simplicity and transparency, a one-stop shop for all renewable hydrogen project promoters seeking EU funding is imperative. **The EHB should be the EU's primary financing instrument for renewable hydrogen projects.**
- With a view to the upcoming review of the EU budget, **all funding related to the production and supply of renewable hydrogen should be streamlined and reallocated to the EHB.** Large scale calls of the ETS Innovation Fund should henceforth focus on supporting the development of a European supply chain and the upscaling of clean tech manufacturing with a **specific budget line for electrolyser manufacturing.**
- To meet the EU's objectives for renewable hydrogen production, **a budget of at least €12billion/year is needed.** A EHB backed with real financial muscle will

help the EU meet its renewable hydrogen targets and ensure Europe remains competitive globally and at the forefront of renewable hydrogen related developments.

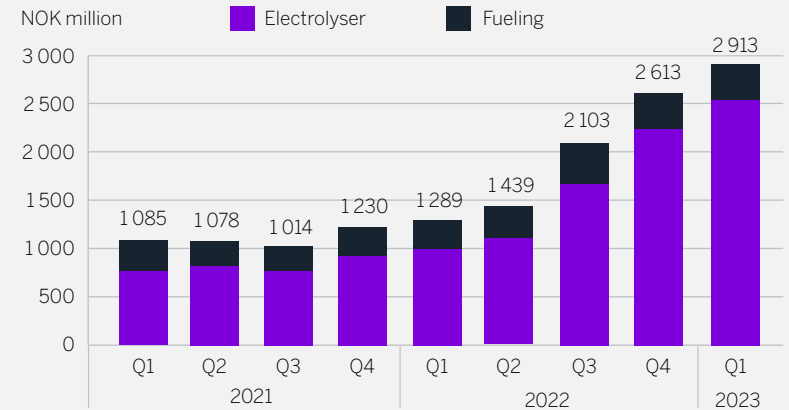
- A strong financial commitment from EU Member States to **the EHB will create a level playing field across Europe.** The EHB will ensure a fair geographic distribution of projects across the EU. The current funding framework favours Member States with the biggest budgets. As such, state aid support for renewable hydrogen projects is currently limited to a handful of Member States.
- Pooling national money from ETS revenues/allowances into one mechanism with one set of rules and criteria will create more transparency and clarity for businesses. Today, access to finance comes with varying rules and conditions from one Member State to another. A European approach is needed which will make the same rules applicable to all, across the board.

Demand for renewable hydrogen is growing:

Order intake



Order backlog



Source: Nel Quarterly Presentation Q1 2023.



2. Non-price criteria that promote the most robust projects

- A feasibility or pre-FEED study should be added as a requirement in project submissions. **Project developers should have a clear and well-informed overview of the financials related to the total investment costs** of the project they are undertaking. In this regard, the requirement of a pre-FEED would help to ensure that the most mature and financially robust projects are prioritized.
- A full Front End Engineering Design (FEED) study should not be considered as a requirement for the purposes of the EHB. It is already an important investment and a project developer might not want to spend that money without having funding assurance.

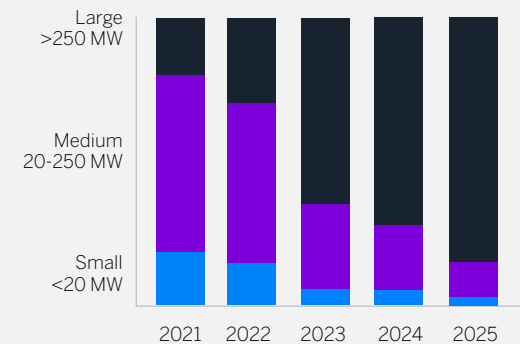


3. Size matters: pilot auction, not pilot projects!

- The **EHB is not another funding instrument to support research and development projects**. The main purpose of the Hydrogen Bank is to facilitate scale up of renewable hydrogen and market ramp-up. As such, it's important to avoid confusing "pilot auction" with "pilot projects". Market trends show clearly that demand for projects below 20MW is waning. As such, the **minimum threshold for electrolyzers should be raised to 20MW**, sending a clear message to investors that we are in a commercialisation phase.
- Project developers seeking financing for pilots or small-scale demonstration projects should direct their projects towards EU Research & Development funding mechanisms such as the Clean Hydrogen Partnership.

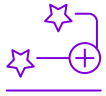


Electrolyzer orders (at FID) % of total GW



Market shifting from small to large-scale projects

Source: Nel Quarterly Presentation Q4 2022.



4. Promoting a renewable hydrogen value chain “Made in Europe”

- To minimise supply chain disruptions and avoid creating new dependencies, European policy should **support and reward companies that show commitment to European standards** and the promotion of a truly European renewable hydrogen value chain.
- The EU should consider awarding extra points to bidders that incorporate an EU supply chain.
- **A level playing field is needed with respect to ESG, compliance and reporting obligations.** All potential exporters to Europe should be held to the same standards as European companies in this regard.

- All projects must respect and align with International Labour Organization standards and the European Convention on Human Rights.
- Projects should show **significant contribution to job creation and centres of excellence;** similar to requirements that need to be fulfilled by Important Projects of Common European Interest (IPCEI).
- The close proximity of project promoters to a local European supply chain and so-called centres of excellence is key to ensuring not only job creation but also the highest level of **innovation, sustainability, quality, reliability and efficiency of products.** It ensures a rapid response in cases where technical issues require attention from highly skilled workers familiar with the technology. Moreover, in cases where products need to be replaced or undergo maintenance, highly skilled workers will have both the knowledge of the project specifics and access to parts of the relevant parts of the supply chain.



What's next ?

A first pilot auction of the Hydrogen Bank with an indicative budget of €800 million is expected to be launched in December 2023.

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