

Boosting Innovation: FBK Breaks Ground on the New Hydrogen Hub in Rovereto

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An important milestone for the Center for Sustainable Energy, enabling the implementation of IPCEI Hy2Tech and establishing a unique infrastructure for research, industrial validation and scale-up of hydrogen and battery technologies in Trentino.

On January 31, 2025, the *Giunta Provinciale di Trento* approves the document entitled “*Idrogeno e batterie: Strategia per la ricerca e lo sviluppo tecnologico in Trentino* [Hydrogen and Batteries: Strategy for research and technological development in Trentino]”. The work is a measure to strategically consolidate, reinforce and update the regional strategy of the Scientific and Technological Hubs which was approved in 2022, underlining the need to identify a place to focus on the topics of hydrogen and batteries. The relevance of FBK and the international positioning of its [Center for Sustainable Energy](#) will transform the new Hydrogen Hub and Trentino in the reference point for energy topics.

Since the signature of the [agreement for the construction of the Hydrogen Hub](#), the FBK Center for Sustainable Energy in collaboration with Trentino Sviluppo has taken several steps towards the realization of the *Hub*: the *Progetto Esecutivo* for the prototyping and testing area has been finalised and the tender for the production, treatment and storage system to be installed in Rovereto has been awarded last March 2026.

We have now reached a pivotal moment: the construction works for the new external facility officially started on May 28th 2026 and will continue over the next 15 months. More than just laying foundations, this moment marks the beginning of **a powerful new chapter for energy innovation in Trentino**. The site will have new facilities at the scale relevant of the industrial applications, testing capacity provided of high flexibility and high capacity up to the megawatt scale, a unique environment for engineering, validating and maturing technologies up to market readiness.

The external infrastructure of the Hub is financed by the [IPCEI Hy2Tech Project Initiative](#) funded with resources from the *National Recovery and Resilience Plan M4C2-I2.1 (IPCEI)* e

IPCEI stands for '*Important Project of Common European Interest*', a European project supported by National funding, in key strategic value chain that consist of several company projects from various EU Member States. IPCEIs make it possible to bring together knowledge, expertise, financial resources and economic actors throughout the Union, so as to overcome important market or systemic failures and societal challenges which could not otherwise be addressed. The four IPCEIs on Hydrogen contribute all together to create a strategic value chain in Europe able to contribute to industrialization, creation of a market improving economic viability, as well as to the objectives of key EU policies on hydrogen and its contribution to the energy transition.

IPCEI Hy2Tech pursues numerous joint overarching objectives which consider different aspects of the hydrogen value chain such as the scaling up of production capacity for electrolyzers, fuel cells, key enabling technologies and critical components, as well as the improvement of hydrogen storing capacity in underground porous structures, to arrive to the establishment of a large-scale First Industrial Deployment of innovative hydrogen technologies in order to capitalize on the RDI efforts made in these fields and unlock vast decarbonisation potential.

The role of FBK in the IPCEI Project

FBK participates in the Hy2Tech IPCEI which is intended to serve as front runner and enabler for all further integrated projects by advancing the relevant technologies in the areas of hydrogen production, infrastructure and utilization for commercial and economic exploitation. This will be made possible by a **joint team approach** that will allow the co-design and co-engineering of technologies, by **laboratory facilities** that will enable the validation and testing of technology components, blocks and systems, by **processes that will guarantee safety and controls**, and by the **implementation of technologies** for different end uses in industry, mobility, and regional ecosystems.

More specifically, **FBK proposes the creation of a multiscale development, testing, and validation infrastructure for R&D&I of hydrogen technologies at the relevant industrial scale, providing support with research, development, and innovation activities to European companies, promoting the development of components/systems for the H2 sector, conducting real-world tests** aimed at reducing direct and indirect costs, enabling and accelerating the large-scale deployment of hydrogen technologies and the activation of the European strategic supply chain.

An integral part of the research facility's offering is the possibility of conducting several tests of industrial relevance, including long-term tests (even longer than 10,000 hours) or accelerated tests, which are **extremely useful and cost-effective in the corporate environment and for defining the business cases for hydrogen**. The project activities planned by the Center for Sustainable Energy of FBK span all the technology fields of the IPCEI project: (i) Development of Hydrogen Generation Technologies, (ii) Development of Fuel Cell Technologies, (iii) Development of Technologies for Storage, Transportation and (iv) Distribution, Development of Technologies for End Users.

Luigi Crema, the Director of the FBK Center for Sustainable Energy, said: *"The new Hydrogen and Battery Hub represent a quantum leap: it brings together advanced research, large-scale prototyping and testing capabilities, and ongoing dialogue with industry. Our mission is to reduce the time between innovation and market, ensuring that the technologies developed here can truly accelerate Europe's energy transition."*

What are the next steps?

The Center for Sustainable Energy is committed to successfully achieve such an ambitious project and infrastructure creation and is working in this direction in strong collaboration with Trentino Sviluppo and the Autonomous Province of Trento as well as all the stakeholders that should be engaged.

The next steps include completing the design of the Hub's exterior areas with the prototyping and testing area. **The IPCEI Hy2Tech with the National Recovery and Resilience Plan fund the construction of the external infrastructure as well as the purchase of the equipment.**

At the same time, Trentino Sviluppo is coordinating the feasibility study of the interior areas, which will house offices and laboratories will be located.

"The research infrastructure and the co-design and co-engineering methodologies established within the Hy2Tech IPCEI were conceived to be a direct bridge to industry needs" **outlines the Head of Hydrogen Technologies and Resilient Energy Systems Matteo Testi.** *"Our focus isn't just on radical innovation, but also on its economic sustainability. We offer the industry a unique environment that not only allows for the rapid development of new technologies for hydrogen production, infrastructure, and utilisation, but is also equipped for long-term testing and validation of components, blocks, and complete systems. This prolonged testing capability is crucial for reducing industrial risk and ensuring reliability on a commercial scale, while FBK aims to accelerate time-to-market without overly burdening companies' initial investments. Furthermore, the flexibility and adaptability of our laboratories extend beyond hydrogen. The very architecture for testing, safety, and control can be rapidly reconfigured to efficiently tackle and support new energy or environmental research sectors as they emerge in the future, ensuring that today's investment remains strategically valuable for decades to come."*

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