

All4Zero launches five open innovation technology challenges to transform industry

- **All4Zero, the industrial technology innovation hub driven by ArcelorMittal, Holcim, Iberia and Repsol, seeks disruptive solutions related to CO2 capture and use, mineralization, renewable hydrogen production, efficient management of water resources, waste recovery, sustainable fuels for aviation and other renewable fuels.**
- **The technological challenges are aimed at startups, technology centers, research teams, universities and SMEs, which will be able to validate their technologies with experts from the hub partners and test them in their laboratories and industrial centers.**
- **The call for challenges will be open until March 22. All4Zero will select up to ten solutions to develop proof-of-concepts in real industrial facilities.**
- **Since its presentation last September, All4Zero has added new partners and collaborators: Aitex, CENER, CIAAE, CSIC, Exolum, Hijos de Rivera, Sacyr, Técnicas Reunidas and Urbaser, which are already part of the hub together with Enagás, Tecnalia and IMDEA Energía, which joined since its foundation.**

Madrid, February 6, 2024 - [All4Zero](#), the industrial technology innovation hub founded by [ArcelorMittal](#), [Holcim](#), [Iberia](#) and [Repsol](#), has announced **the public launch of its first five technology challenges** related to CO2 capture and use, mineralization, renewable hydrogen production, efficient management of water resources, waste valorization, sustainable fuels for aviation and other renewable fuels.

The *hub* seeks technological solutions from startups, technology centers, research teams, universities and SMEs capable of providing technological solutions to decarbonize industrial activity.

Technological developments applicable to the five defined challenges can be submitted through the **All4Zero** website (all4zero-hub.com/challenges) until **March 22**. The applications will be evaluated by teams of scientists and experts from **All4Zero**, who will select **up to ten solutions** to **develop proof-of-concepts at the hub members' industrial centers**.

All4Zero, which was presented last September, has worked during these months on the selection of the most pressing challenges facing the industry to accelerate its transition to a more sustainable, decarbonized model with a strong emphasis on the circular economy. Thus, the solutions that are expected to be assessed must contribute to the reduction of emissions and the promotion of a circular economy.

"We are living in a time of transformation of the industry, which will be decisive to achieve net zero emissions in 2050, therefore, we need to be open to assess all solutions and technologies that help us achieve that goal and undoubtedly, collaborative work and partnerships will be key," said the president of **All4Zero** and director of Open Innovation and Corporate Venture of Repsol, **Gema García**, who was accompanied during the presentation by the global director portfolio of R&D production process projects of ArcelorMittal, **Pedro Prendes**; Holcim Spain's Director of Sustainability, **Mariano García**; and Iberia's Director of Innovation and Digital Transformation, **Nacho Tovar**.

All4Zero experts and researchers will assess proposals related to:

1. Efficient carbon capture and emission reduction. **All4Zero** is looking for technological solutions that contribute to advance the solution for CO2 emissions that cannot be abated by other means and that are ready to be integrated into industrial production processes.

2. Securing water resources. The hub aims to assess technologies that optimize water use in industrial processes, promoting efficiency and circularity, as well as solutions for water resource recovery, water harvesting and water management.

3. Enhance efficiency in obtaining renewable hydrogen. All4Zero will explore technological solutions for the development of advanced electrolysis processes and other technologies for obtaining renewable hydrogen, as well as options to facilitate the safe transport and storage of this hydrogen.

4. Generation of SAF and other renewable fuels and CO2 mineralization. The different uses that can be given to CO2 is one of the objectives pursued by the hub with the launch of this challenge with dual application. Therefore, disruptive technologies are being sought to convert captured CO2 into new materials that can be used as raw materials in industrial processes, the production of SAF (Sustainable Aviation Fuel) and other renewable fuels for transportation.

5. Use of materials from waste. This challenge seeks solutions to reduce the waste that ends up in landfills and therefore contributes to greenhouse gas (GHG) emissions, since a large amount of this waste has a high potential and can be reintroduced into the production chain, thus promoting circularity.

New partners and collaborators

During the presentation, the new companies and entities that have joined the **All4Zero** project and that will provide expertise in relevant sectors, such as logistics and distribution, engineering, construction, waste management, textiles or the food sector, were also announced.

New partners include **Aitex** (an innovation center in the textile and cosmetics sector), **Exolum** (a company dedicated to the storage, transport and distribution of fuel), **Hijos de Rivera** (a company that produces and distributes brands such as Estrella Galicia and Cabreiroá), **Sacyr** and **Técnicas Reunidas**, both specialized in engineering, and **Urbaser**, which is dedicated to environmental management. All of them, in addition to **Enagás**, which has been a partner of the hub from the beginning.

In addition, the **Centro Ibérico de Investigación en Almacenamiento Energético (CIIAE)**, the **Centro Nacional de Energías Renovables (CENER)** and the **Consejo Superior de Investigaciones Científica (CSIC)** have joined the project as collaborators, together with **Tecnalia** and **IMDEA Energía**, which were already partners.

About All4Zero

All4Zero is a private, multi-sector and non-profit industrial technology innovation hub, unique in Spain, driven by ArcelorMittal, Holcim, Iberia and Repsol, leading companies in different sectors, which have joined forces in this pioneering initiative, motivated by a common goal: to accelerate the development of disruptive technologies and projects that contribute to decarbonization and the circular economy.

More information

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