

## Iberdrola leads the Atmosphere consortium to boost green hydrogen production

- Ingeteam Power Technology, Inerco Ingeniería Tecnológica y Consultoría, ABC Compressors, Ingeniería y Diseño Europeo and Innometrics will research together with the energy company.
- The project has obtained €4.1 million in funding from the Missions Call for Proposals promoted by the Centre for the Development of Industrial Technology (CDTI).

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Iberdrola leads the Atmosphere consortium with the participation of Ingeteam, Inerco, ABC Compressors, IDESA and Innometrics, whose main objective will be to research new technologies associated with critical equipment in green hydrogen generation plants, covering the entire value chain, so as to enable a significant reduction in investment costs and the operation and maintenance of these plants.

To validate the developments carried out in the project, the Iberdrola plant in Puertollano (Ciudad Real), one of the world's largest hydrogen production systems using electrolysis (20 MW), will be used.

The initiative, which runs from 2022 to 2025, has a total budget of 6.2 million euros earmarked entirely for research, is part of the Missions programme of the Centre for the Development of Industrial Technology (CDTI), an agency of the Ministry of Science and Innovation, and has secured funding of €4.1 million.

The project represents the public-private commitment to promote a collaborative R&D&I scheme that accelerates the fulfilment of the energy transition objectives. It also highlights the need to promote a safe, efficient and clean energy for the 21st century, such as green hydrogen.

The public-private commitment is satisfied with the participation of seven public research organisations (OPIs), including technology centres and universities, such as: TECNALIA, IIT Comillas, the Idonial Foundation, the Public University of Navarre (UPNA), the Andalusian Association for Research and Industrial Cooperation (AICIA), the CEIT Technology Centre Association and IDESA Technology & Research Centre.

Throughout this project, research into different technologies and elements associated with green hydrogen will enable progress to be made in the decarbonisation of industry, as established as a priority objective of the Green Hydrogen Roadmap in Spain.

On 15 February 2023, the project launch meeting was held at the Iberdrola Training Campus in San Agustín de Guadalix, with the participation of all the partners and IPOs involved in the project, which established the starting point for the development of the project.

### Pioneers in green hydrogen

In its commitment to lead the energy transition, as it did with renewables more than 20 years ago, Iberdrola has become a 'first mover' in this new technological challenge that involves the

production and supply of green hydrogen, and is leading its development with more than 60 projects in eight countries and alliances with more than 150 SMEs and large companies.

The company's objective is to reach 350,000 tonnes of renewable hydrogen production per year by 2030. To this end, it has a portfolio of more than 2,000 MW in different regions, mainly in Spain, the United States and Australia.

Iberdrola currently has two of the three green hydrogen factories in Spain. One in Barcelona and the other in Puertollano. Both have just been recognised with the 'AENOR Renewable Hydrogen Verification' seal. Iberdrola has thus become the first company to obtain this qualification from the certification body.

The Barcelona plant is the first hydrogen plant for public and commercial use to supply green hydrogen in Spain. It occupies 5,000 m<sup>2</sup> in the Zona Franca industrial estate in the city of Barcelona, near the port and airport, and is the first stone in an ecosystem of companies and infrastructures dedicated to green H<sub>2</sub> to decarbonise heavy transport and industrial activities. It is operational 24 hours a day, seven days a week.

With 20 MW built, the Puertollano plant is the largest H<sub>2</sub> plant in Europe. Connected directly to a 100 MW PV plant nearby and to the grid, it has the capacity to produce up to 3,000 t/year.

Iberdrola's objective is to develop the value chain of one hundred percent green hydrogen, i.e., without any CO<sub>2</sub> emissions, and to concentrate in the industrial centre of Huelva, specifically in the town of Palos de la Frontera, the largest centre in Spain for the production, transformation and consumption of green hydrogen, with the clear objective of decarbonising industry and heavy transport.

The use of green hydrogen should focus on applications where there are no other alternatives. In other words, to replace grey hydrogen (produced from fossil fuels) with green hydrogen (produced from renewables) in sectors where it is currently used, such as fertilisers, methanol or refineries. In short, for industrial uses and to reach those sectors where electrification is not sufficient.