



European
Commission



INNOVATION FUND

Deployment of net-zero and innovative technologies

ASTURIAS H2 VALLEY: ASTURIAS H2 VALLEY

The Innovation Fund is 100% funded by the EU Emissions Trading System

| Project Factsheet

The Asturias H2 Valley project consists of a first-of-a-kind Power-to-Hydrogen Hub to produce and supply renewable hydrogen, with the overall objective to decarbonise the economy of the region of Asturias, Spain. The project aims to develop a renewable hydrogen plant with 150 megawatts (MW) of electrolysis capacity by repurposing the site of Aboño's existing coal power plant, aiming to achieve 99.98% relative greenhouse gas emission avoidance compared to the reference scenario.

The project will demonstrate the viability of a fully integrated hydrogen production and distribution process, optimised on the availability of renewable energy (wind and solar) and on demand from off-takers from multiple sectors. A project of this scale has not been demonstrated before. In the process of the gradual phasing-out of the coal power plant, the hydrogen plant will repurpose the existing installations and infrastructure to 1) lower the

COORDINATOR

H2 ABOÑO SA

LOCATION

Spain

CATEGORY

Energy intensive industries (EII)

SECTOR

Hydrogen

AMOUNT OF INNOVATION FUND GRANT

EUR 18,072,962

EXPECTED GHG EMISSIONS AVOIDANCE

1,329,786 tonnes CO2 equivalent

STARTING DATE

01 January, 2024

ENTRY INTO OPERATION DATE

31 December, 2026

FINANCIAL CLOSE DATE

31 December, 2024

initial investment costs, 2) reduce the environmental impact (as it is not necessary to install new electricity supply infrastructures, process and cooling water supply systems or effluents treatment plant and network, among others) and 3) reduce administrative processing and permitting times. The project will not only increase circularity, but also provide an industrial-size technical demonstration for projects at other sites in transition to emulate. Moreover, the project will avoid consuming around 650 gigawatt hours (GWh) of fossil fuels every year, the equivalent of the annual emissions of more than 45 000 Spanish households. Overall, the project plans to avoid absolute greenhouse gas emissions of 1.3 million tonnes of CO2 equivalent over the first ten years of operation.

Through many of its planned activities, the project will strongly contribute to several EU and national climate related strategies and goals, such as the European Green Deal, EU Hydrogen Strategy,

Circular Economy Action Plan, and REPowerEU, while following the Just Transition principles. Achieving 150MW of electrolysis will also directly contribute to the European goals of deploying electrolysis capacity to produce renewable hydrogen.

With a strong alignment with the Just Transition principles, it is estimated that the project will generate 55 direct jobs during its implementation, each with high added value, thus contributing to the maintenance of employment and the reconversion of currently declining industries in the region. In addition, in the construction phase more than 400 direct jobs are expected to be generated. The project will benefit the off-takers by reducing their consumption of fossil fuels. It will also contribute to a positive trade balance by reducing imports of coal and natural gas, and will strengthen the position of the region in the fast-growing hydrogen market, through the participation of local companies across its value chain.

| Participants

EDP ESPANA SA

Spain

EDP RENOVAVEIS SA

Spain

EDPR PT PROMOCAO E OPERACAO SA

Portugal

H2 ABOÑO SA

Spain