



HIGGS, a key project to promote decarbonisation in Europe coordinated by the Aragon Hydrogen Foundation

The Vice President of the Government of Aragon (Spain), Arturo Aliaga, has participated in the kick-off meeting to launch an European cooperation initiative that for 36 months will study the possibilities of injecting hydrogen into existing natural gas networks as a way to reduce CO₂ emissions.

The new European directives on energy and the environment are clear: the continent's economy must be decarbonized, and efforts must be intensified in order to reduce contaminating emissions with an horizon of a 45% reduction by 2030. This requires a comprehensive strategy that includes an increase in energy production from renewable sources, decarbonization of the heating and cooling systems –still largely based on fossil fuels– a significant reduction in emissions from transport as well as greater integration, flexibility and Independence of European energy markets.

In this context, hydrogen originating from renewable resources can play an important role as an energy vector that helps to meet the aforementioned objectives in areas and sectors that are difficult to electrify, which requires careful planning to bring it from where it is produced to where it is going to be used. And the current natural gas networks can be an excellent option for doing so.

This is precisely the objective of the HIGGS project (*Hydrogen In Gas GridS: a systematic validation approach at various admixture levels into high pressure grids*) which is now launching with the aim of analysing the existing potential and requirements of the infrastructure, its components and its management – that involves injecting hydrogen into the current high pressure natural gas transport networks, something that will undoubtedly contribute to decarbonising gas uses.

The Foundation for the Development of New Hydrogen Technologies in Aragon, located in the Walqa Technology Park in Huesca (Spain), has hosted the kick-off meeting of this Project. The event has been chaired by the president of the Foundation and Vice President of the Aragon Autonomous Community, Arturo Aliaga, who has welcomed the partners of HIGGS. [REDEXIS](#) (Spain), [DVGW](#) (German Association for Gas & Water, Germany), [TECNALIA](#) (Spain), [HSR](#) (University of Applied Sciences of Rapperswill, Switzerland) and [ERIG](#) (European Research Institute for Gas and Energy Innovation, based in Belgium) are the partners of this project coordinated by the Foundation.

The HIGGS Project has a duration of 36 months and a budget of 2 million Euros from European funding. To evaluate how different degrees of natural gas and hydrogen mixture behave in relation to the transport infrastructure, simulating different operating conditions by varying the flow, composition and quality of the gas, a testing platform will be developed at the facilities of the Aragon Hydrogen Foundation where all the elements will be tested at high pressure. Among them, a novel gas separation system developed within the framework of the Project that is based on membrane technology.

The HIGGS Project has received funding from the Fuel Cells and Hydrogen 2 Undertaking (FCH JU) under Grant Agreement no. 875091. The JU receives support from the European Union's Horizon 2020 research and innovation programme and Spain, Germany, Belgium and Switzerland. The FCH JU is the main public-private partnership in Europe supporting research, technological development and demonstration activities in the field of hydrogen and fuel cell technologies.

About the Aragon Hydrogen Foundation

The Foundation for the Development of New Hydrogen Technologies in Aragon is a private non-profit organization created more than 15 years ago. Based in the Walqa Technology Park in Huesca (Spain), it has a Board of Trustees composed of 75 members, most of them private companies of reference in their respective sectors.

With a team of 25 people, the Foundation carries out the organisation, management and execution of all types of actions to generate, store and transport hydrogen for its use in fuel cells and in transport application, both distributed energy generation and production of synthetic or alternative fuels (Power-to-gas/Power-to-fuel). It also encourages research, technological development, industrial adaptation and the implementation of sustainable energy-based projects that make technological innovation possible & promote energy and environmental sustainability.

In recent years, the Aragon Hydrogen Foundation has intensified its activity in initiatives that address the challenge of energy transition and contribute to the decarbonization of transport and the energy sector, challenges in which hydrogen is called to play an important role for its sustainability, versatility and cross-cutting component, in line with what the main strategies and institutions at European and global level are advocating.