PureH2, the project chosen by IDAE due to its innovation for storing green hydrogen

Coordinated by Enagás and promoted by CRS Ingeniería, Trinity Energy Storage, H2SITE and Iberpotash. This project will receive more than two million euros in funding to optimize renewable hydrogen storage purification systems in salt caverns

Madrid, 12 July, 2024. The PureH2 project is based on the optimization of purification systems for green hydrogen storage in salt caverns. The project has been selected by the Institute for Energy Diversification and Saving (IDAE) to receive 2,089,014 euros in funding.

The partners of this project, coordinated by Enagás, are: the consulting firm CRS Ingeniería, the energy company Trinity Energy Storage, the manufacturer of hydrogen separation units based on H2SITE palladium alloy membrane technology, and the mining company Iberpotash (ICL Iberia). Pure H2 is also part of the aid program for the innovative renewable hydrogen value chain of the Recovery, Transformation and Resilience Plan - within the NextGenerationEU instrument, funded by the European Union.

With a duration of 36 months and a total budget of 2,888,719 euros, this project will contribute to acquire more knowledge for the development of a possible future storage for hydrogen in salt caverns in the geological area of the Ebro Basin.

The project focuses on developing a purification solution for hydrogen stored in salt cavities by using and comparing different membrane technologies (palladium and carbon), once the hydrogen is extracted. Membrane technology is new and, depending on the type of application, can be much more efficient than existing systems, such as PSAs *(Pressure Swing Adsorption*).

Key technological advance

Arturo Gonzalo, the CEO of Enagás, stated that "the development of purification systems suitable for use in underground storage is a key technological advance for the deployment of the green hydrogen value chain, a crucial vector for the decarbonization and strategic autonomy of Spain and Europe".

The CEO of CRS Ingeniería, Juan Ignacio Coullaut, pointed out that "energy storage is a priority for the deployment of renewable energies, which are essential to achieve the goal of zero emissions. Spain has the generation capacity and has geologically favourable areas for energy storage, some of them with locations as strategic as those of the project".

Trinity's Exploration Director, Julio Matesanz, emphasized that "the PureH2 project advances in the technological development for the underground storage of energy from renewable sources in the form of green hydrogen. This is a key factor at the moment to achieve total decarbonization of the economy, ensuring energy supply in a carbon neutral scenario".

H2SITE's CEO, Andrés Galnares, highlighted that "the PureH2 project is a very good opportunity to demonstrate the adaptability of palladium alloy membrane technology for hydrogen purification, based on the gas composition at the outlet of the salt cavern storage and the high-pressure conditions".