

## Enagás and Naturgy are studying the production of green hydrogen using 350 MW of wind energy in Asturias

- The project contemplates the production of green hydrogen from a 250 MW off-shore wind farm and a 100 MW on-shore wind farm. The power will be used for consumption by Asturian industry and to decarbonise sectors such as steel and shipyards. This hydrogen will also be distributed on a large scale through the gas pipelines and exported to Europe.
- The project, which is part of the Green Crane initiative promoted by Enagás, has previously been presented as a nominee for a project of common European interest (IPCEI) and could lead to a total of over 1,500 jobs in the construction and operation stages.
- With the renewable electricity production envisaged in the project, it is estimated an emissions savings of more than 200,000 tonnes of CO<sub>2</sub> equivalent per year.

**Madrid, 1 February 2021.** Enagás and Naturgy are studying the production of green hydrogen from a 250 MW floating off-shore wind farm and a 100 MW on-shore wind farm in Asturias, for consumption by industry located in this Autonomous Community. The project is a candidate for the Project of Common European Interest (IPCEI) and enables the generation of this green hydrogen by taking advantage of indigenous energy resources to obtain greater value-added.

Specifically, the project contemplates the development of an electrolysis and renewable energy plant, for which the construction of both an on-shore and an off-shore wind power plant off the coast of Asturias is envisaged. The latter will be built using floating technology developed by the Navantia-Windar joint venture, with up to 24 platforms that will make it possible to generate renewable energy. The initiative will allow progress to be made in the energy transition by favouring the decarbonisation of sectors such as steel and shipyards, and will also be extended to other sectors, thanks to the injection of renewable hydrogen into the gas pipelines.

This project will be able to generate more than 1,500 jobs in the construction and operation phases and, thanks to the estimated renewable electricity production, an initial saving in emissions of more than 200,000 tonnes of CO<sub>2</sub> per year is expected.

The first deployment of the technology will be on a demo scale, with an output of 50 MW of off-shore wind power and 100 MW of on-shore wind power, a 5 MW off-shore electrolyser and a 100 MW on-shore electrolyser. In a follow-up phase, the project could be expanded to 250 MW of off-shore wind with an additional 100 MW on-shore electrolyser.

The project will allow experience to be gained in the large-scale integration of electrolysis and renewable energy, both on-shore and off-shore, as well as advancing on the path to reducing the costs of green hydrogen production.

The green hydrogen will be consumed locally, distributed through the gas pipelines and exported to Europe, thus establishing the first European large-scale green hydrogen production and transmission chains to decarbonise sectors and strengthen the European energy system, positioning Spain as a producer and exporter country. This will enable progress to be made in the different alternatives for

transporting green hydrogen over long distances, as well as in the use of gas infrastructures, either through blending or the long-term reconversion of these infrastructures.

Accordingly, local industries will also benefit from the project as it concerns sectors where electrification is difficult, given that the hydrogen will be marketed in a blend with natural gas via Guarantee of Origin mechanisms. This will allow access to the decarbonisation of sectors that are difficult to electrify without having to undertake investments in the short-medium term that could reduce their competitiveness.

Enagás and Naturgy, as the main players in the Spanish gas sector, are called to play a key and relevant role in the energy transition as agents to drive the development of the green hydrogen value chain. This energy vector is capable of channelling large amounts of renewable energy to sectors where electrification is not a feasible option, and also allows energy to be stored and managed on a massive scale and over long periods of time, matching energy supply and demand.

### **Hydrogen development**

Enagás and Naturgy are aware of the importance of the Principality of Asturias in the context of the energy transition. Accordingly, they are taking part in the Hydrogen Round Table set up by the Autonomous Community of Asturias to help the region's industry to incorporate renewable gases, and especially hydrogen, into its productive economy, taking advantage of the innovation and development capabilities of Asturias and the positioning and presence that both Enagás and Naturgy already have in the region.

Naturgy has been researching the development of hydrogen for years, as the renewable resource, the existing infrastructure and its geostrategic position mean that Spain has the full potential to become an exporter of hydrogen in the future. This is because the export of this new energy can be carried out through the current gas infrastructure, which would allow the electricity and gas grids to be integrated, creating a more efficient and resilient energy system.

For Enagás, this project is part of its strategy to develop non-electric renewable energies, such as green hydrogen and biogas/biomethane, as new energy solutions that will play a fundamental role in the energy transition process marked by the European Union. Enagás is the main natural gas transmission company and Technical Manager of the Spanish gas system and one of its objectives is to develop and facilitate export routes and key projects in this context to position our country as a benchmark in this sector.

In a context in which there is a worldwide commercialisation of hydrogen, the long-distance transport and distribution in liquid form -as occurs with LNG- can be key, and both Enagás and Naturgy are essential players who can provide their capacity and global knowledge throughout the value chain.

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