

Press release

2nd Enagás Hydrogen Day

The results of the Call For Interest carried out by Enagás confirm the hydrogen transport infrastructures submitted to the Projects of Common Interest (PCI)

The Vice-President and Minister for Ecological Transition and the Demographic Challenge, Teresa Ribera, inaugurated the event, and the Executive Vice-President of the European Commission, Dr. Maroš Šefčovič, also participated in the opening telematically. The Chairwoman of the CNMC, Cani Fernández, will bring the conference to a close.

Enagás CEO Arturo Gonzalo presented the 2030 Call For Interest scenario, which shows hydrogen production of approximately 2.5 million tonnes per year, 23.3 GW of electrolysis capacity and consumption of one million tonnes.

The baseline scenario, with the most mature projects destined for domestic consumption, is fully aligned with the PNIEC.

The data has been provided by a total of 206 companies with 650 projects and identifies new areas of production and demand aggregation.

They also highlight the market's interest in ammonia and CO₂ infrastructures.

- The Vice President and Minister for the Ecological Transition and the Demographic Challenge, Teresa Ribera, has stated that "we must design hydrogen transport networks with specific requirements for operators, with conditions of access to networks and infrastructure and integrated planning that combines and ensures the correct connection between the electrical, gas and hydrogen networks".
- During the inauguration, European Commission Executive Vice-President Dr Maroš Šefčovič stressed in a video that "without the right infrastructure at the right time, we will never be able to deliver on the enormous promise of renewable hydrogen".
- In his welcome address, the Chairman of Enagás, Antonio Llardén, recalled that "renewable hydrogen is the key to the decarbonisation of key sectors such as industry and transport" and stated that "there is no time to lose".
- The CEO of Enagás, Arturo Gonzalo, stressed "that the production and consumption data illustrate Spain's enormous potential to be a European hydrogen hub".
- Arturo Gonzalo also pointed out that the "Call For Interest has made it possible to identify production and/or consumption centres in all the Spanish peninsular autonomous communities, with what this will mean for our industries and for the economic development of the territories".
- A total of 206 companies with 650 projects participated in the Call For Interest, which shows the high interest and support of the entire sector in an open, transparent and non-discriminatory process, audited by Bureau Veritas.
- The Spanish hydrogen infrastructure presented to PCI would represent a total gross investment of 4.9 billion euros, and H2Med an estimated total gross investment in Spain of 1 billion euros.
- The final investment will be the one resulting from the design of the Spanish Hydrogen Backbone to be defined in the Government's binding plan.

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Madrid, 31 January 2024. Today marks the 2nd Enagás Hydrogen Day, bringing together authorities, institutions, companies and leading experts in the field of renewable hydrogen.

At the opening ceremony, the Vice President and Minister for the Ecological Transition and the Demographic Challenge, Teresa Ribera, highlighted that “we must now complete the European regulatory package for hydrogen and renewable gases, approved with a political orientation during the Spanish Presidency of the EU. We must introduce these provisions in our national regulation and we must design the hydrogen transport networks with specific requirements for operators, with conditions of access to the networks and infrastructure and integrated planning that combines and ensures the correct connection between the electrical networks, gas and hydrogen.”

European Commission Executive Vice-President Dr Maroš Šefčovič said: “Without the right infrastructure at the right time, we will never be able to deliver on the enormous promise of renewable hydrogen”. The Director of Energy Policy of the European Commission, Cristina Lobillo, also took part in the conference.

Meanwhile, the Chairman of Enagás, Antonio Llardén, pointed out that “renewable hydrogen is the key to the decarbonisation of key sectors such as industry and transport” and stated that “there is no time to lose”.

The CEO of Enagás, Arturo Gonzalo, stressed that “the production and consumption data show Spain’s enormous potential to be a European hydrogen hub and in the future also to be the gateway for renewable hydrogen from North Africa to Europe”. Furthermore, he remarked that “the Call For Interest has made it possible to identify production and/or consumption centres in all of Spain’s peninsular autonomous communities, with what this will mean for our industries and for the economic development of the territories”.

Call for interest Results

As part of the 2nd Hydrogen Day, Enagás presented the results of the Call For Interest of the Spanish hydrogen infrastructure, which the company carried out in the last quarter of 2023.

This non-binding consultation has had a very high turnout and has been well supported by the whole sector. In total, 206 companies participated, 45% of which registered as producers, 40% as consumers and 15% as marketers, with 650 projects - 65% production, 20% consumption and 15% marketing - in an open, transparent and non-discriminatory process, audited and verified by Bureau Veritas.

The results conclude that, as of today, the projected supply and consumption confirm the design of the transport and storage infrastructures submitted to the PCI call, and identify new areas of production and demand aggregation.

Supply and demand forecasting

The analysis of the data collected in the Call For Interest defines three scenarios for 2030: a maximum potential scenario that includes the total figures incorporated by the agents participating in the process, a “Call For Interest” scenario that takes into account the most mature projects, and a baseline scenario that only considers mature projects focused mainly on domestic consumption, whose figures are very much in line with those included in the proposed National Integrated Energy and Climate Plan (PNIEC).

The “Call For Interest” scenario puts renewable hydrogen production by 2030 at around 2.5 million tonnes per year (Mt/y), and identifies an electrolysis capacity of 23.3 Gigawatts (GW). In this scenario, the demand for green hydrogen in Spain would be around 1 Mt/y, a figure higher than the current consumption of approximately 600,000 tonnes of grey hydrogen per year.

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"This shows us that, by 2030, Spanish industry will have made progress in replacing grey hydrogen with green hydrogen", and that, by that date, "new uses of this vector are foreseen", said the CEO of Enagás.

The maximum potential scenario adds up to a total production of 7.9 Mt/y, an electrolysis capacity of 74.3 GW and a consumption of 1.4 Mt/y. The baseline scenario assumes a production of 1.6 Mt/y, an electrolysis capacity of 13.4 GW and coincides with a consumption forecast of 1 Mt/y.

The company's vision for 2040, based on the maximum potential scenario, shows a maximum renewable hydrogen production of 8.7 Mt/y, an electrolysis capacity of 84.3 GW and a consumption of 1.5 Mt/y.

The results of the Call for Interest have confirmed the infrastructures proposed at the first Enagás Hydrogen Day and submitted to the European Commission's call for PCI: the Cantabrian Coast Axis, Ebro Valley Axis, Levante Axis, Vía de la Plata Axis -with its connection to the Puertollano Hydrogen Valley-, the Guitiriz-Zamora Axis, as well as two underground hydrogen storage facilities in Cantabria and the Basque Country.

The results have made it possible to identify new areas of aggregation of production and demand that will be analysed on the basis of identified needs.

The Spanish hydrogen infrastructure will connect with the H2Med corridor - a project in which Enagás and the Transmission System Operators (TSO) of Portugal, France and Germany are participating as promoters - which will enable the Iberian Peninsula to become the first hydrogen hub in Europe. The corridor, included in the PCI list, includes the section between Celourico da Beira in Portugal and Zamora (CelZa), and the maritime connection between Barcelona and Marseille (BarMar).

Spain stands out as a potential major producer of green hydrogen with capacity to export to other countries and with a key role in achieving the European consumption target of 20 million tonnes of hydrogen by 2030 as established in the REPowerEU, of which 10 million tonnes would be produced in Europe.

Arturo Gonzalo stressed that "the Call For Interest process will be of great help because it will provide detailed information on the real needs of the hydrogen system participants in Spain, which will have to be analysed in detail". And he pointed out that "the design of the Spanish Hydrogen Backbone is subject to what is defined in the Government's binding plan"

Estimated investments

The Spanish hydrogen infrastructure submitted to PCI would involve a total gross investment of 4.9 billion euros. Spain's total gross investment in H2Med will be around 1 billion euros. These investments will be finalised in accordance with the binding plan to be defined by the Spanish Government.

Results on ammonia and CO₂

The Call For Interest has also gathered industry interest in producing more than 5 Mt/y of ammonia (NH₃), which implies an approximate consumption of 0.9 Mt/y of hydrogen. In addition, 41 companies have revealed interest in the use of infrastructure for the transport of around 4 Mt/y of ammonia

Likewise, the data obtained show that a total of 37 companies are interested in CO₂ capture -it is estimated that they are interested in capturing 10.4 Mt/y-, and 53 in having infrastructures for its transport and storage.

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Enagás, provisional manager of the Spanish Hydrogen Backbone

Royal Decree-Law 8/2023 of 27 December allows Enagás, as TSO, to operate as provisional manager of the Spanish Hydrogen Backbone, and it must submit a proposal for the hydrogen backbone infrastructure for Spain, with a ten-year horizon, to the Directorate General for Energy Policy and Mines, before 29 April.

In addition, it qualifies the company to represent Spain in the creation of the European Network of Network Operators for Hydrogen (ENNOH) and allows it to provisionally develop the Hydrogen Backbone Network within the scope of projects of common European interest, PCI, through horizontally separate legal entities.

Presentations and round tables

Following the institutional opening, and in addition to the presentation of the results of the Call For Interest, made by the CEO of Enagás, Arturo Gonzalo, several round tables and presentations will be held throughout today at the 2nd Enagás Hydrogen Day.

The CEO of Hydrogen Europe, Jorgo Chatzimarkakis, will be moderating the round table "The role of infrastructures in the development of hydrogen in Europe", in which, in addition to the CEO of Enagás, the CEOs of the Portuguese operator REN, Rodrigo Costa, of the French GRTgaz and Teréga, Pierre Duvieusart (Deputy CEO) and Dominique Mockly respectively, of the Greek DESFA, Maria Rita Galli, and the CFO of the German OGE, Dr Frank Reiners, will also participate.

Stefan Reuter, Research Engineer at AIT Austrian Institute of Technology, will be delivering the technical presentation "Opportunities for importing renewable hydrogen", which highlights the efficiency of hydrogen transport by pipeline, pointing out that it is the option with the lowest overall costs.

This presentation is followed by the round table discussion "Financing hydrogen projects and EU PCIs", moderated by Enagás' Chief Financial Officer, Luis Romero, with the participation of the Director of the European Climate, Infrastructure and Environment Executive Agency (CINEA), Paloma Aba Garrote, the Deputy Assistant Secretary for Foreign Investment, National Security and Technology Collaboration of the US Department of Energy, Michael Considine, the Director General of the German Energy Agency (Dena), Kristina Haverkamp and the Partner of Copenhagen Infrastructure Partners (CIP), Philip Christiani.

Next, the PwC Energy Partner, Óscar Barrero, will be presenting the report 'Socio-economic impact of the development of the hydrogen economy in Spain'.

This presentation will be followed by the round table discussion 'The socio-economic and technological impact of a green hydrogen economy', moderated by the Co-Chair of the European Hydrogen Backbone, María Sicilia, with the participation of the CEO of Impact Hydrogen, Nienke Homan, the Director of the Institute for Just Transition, Laura Martín Murillo, the Chairman of the Spanish Hydrogen Association, Javier Brey, and the Chairman of Sedigas, Joan Batalla.

After this debate, the Chairman of the Iberian Gas Market (Mibgas), Raúl Yunta, will give a talk on 'Towards a first Spanish hydrogen price index'.

In the afternoon, following the presentation of the Enagás Hydrogen Metrology Centre, HyLoop, by Enagás' General Manager of Infrastructures, Claudio Rodríguez, and the company's Director of Technical Services, Rosa Nieto, the round table discussion 'The hydrogen value chain' will take place, moderated by the Chairman of Shyne (Spanish Hydrogen Network), Tomás Malango, with the participation of the Hydrogen Business Development Manager, Gas and Low Carbon Energy of bp, Carolina Mesa, the CEO of Atlantic Copper, Javier Targhetta, the General Manager of



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Reganosa, Rodrigo Díaz, the Secretary General of Gasnam, Eugenia Sillero, and the CEO of Nortegas, Javier Contreras.

Following the closing speech and conclusions of the CEO of Enagás, Arturo Gonzalo, the Chairman of the National Markets and Competition Commission (CNMC), Cani Fernández, will bring the event to an institutional close.

**Communication, Public Affairs
& Investor Relations General Management**

(+34) 91 709 93 40

dircom@enagas.es

www.enagas.es

