

Three technology projects to drive the energy transition win the Ingenia Energy Challenge

- The *Archydra* and *CSIC-Structural evaluation of gas pipelines for H₂ transport* initiatives win the final of the Enagás *Emprende Ingenia Energy Challenge* in the Internal Proposal and External Proposal categories, respectively
- Mayte Bolumar, with her *AZIM* project, wins the *Enterprising Woman* award. Women were behind 40% of the entries in this competition
- A total of 62 initiatives were submitted in this new edition, making Enagás as a benchmark in open corporate entrepreneurship to advance the energy transition

Madrid, 29 May 2024. The *Archydra* and *CSIC-Structural evaluation of gas pipelines for H₂ transport* projects were two of the winners of the fifth edition of Ingenia – the second in the open format as the Ingenia Energy Challenge – in the categories of Internal Proposal, which promotes intraentrepreneurship at Enagás, and External Proposal, respectively.

The former, carried out by professionals at Enagás, applies the unlimited renewable energy of seawater to the processes of treating and managing renewable molecules, such as CO₂ liquefaction and the production of green hydrogen and nitrogen, supported by regasification plants, achieving high efficiency and yields.

The latter, developed by the Spanish National Research Council (CSIC), focuses on the structural assessment of gas pipelines for hydrogen transport using CSIC-patented technology to verify the integrity of hydrogen pipelines and reused gas pipelines, enabling their certification for hydrogen transport.

In addition, Mayte Bolumar, with her *AZIM* project, was named the winner of the new *Enterprising Woman* category of this year's edition, which recognises women's contribution to advancing the energy transition. In this edition of the Ingenia Energy Challenge, 40% of the entries were from women, double the percentage of previous editions.

This project is based on the development of a comprehensive online training solution focused on the inspection and maintenance of renewable gas installations.

In his welcome speech at the Ingenia Energy Challenge final event, the CEO of Enagás, Arturo Gonzalo, stressed that "innovation is not only important" but also "urgent", taking into account that this type of "innovation not only responds to an objective of growth, but also to social progress". The CEO also explained that through this initiative, "we seek innovation to advance the energy transition with a purpose that transcends business and economic objectives".

Arturo Gonzalo presented the award for the best Internal Proposal; the Chief Innovation & Technology Officer of Redeia, Silvia Bruno, presented the award for the best External Proposal; and the General Director of Communication, Institutional and Investor Relations of Enagás, Felisa Martín, presented the award for the best *Enterprising Woman*.

In addition to the three winning projects, four other projects – out of a total of 62 projects submitted – were acknowledged by the judges for having reached the final of the Ingenia Energy Challenge, all providing disruptive solutions that contribute to decarbonisation:

EnaMOF is a proposal from the Leitat Technology Centre, sponsored by the government of Catalonia, together with the Industrial Technology Centre of Castilla-La Mancha (ITECAM), the applied research technology centre of the University of Valladolid (CARTIF) and the Technological Institute for Packaging, Transport and Logistics of Valencia (ITENE), for the development of metal-organic frameworks (MOFs) for the prevention and monitoring of methane and hydrogen emissions in gas distribution and transmission systems.

Sillex, an initiative by the Canary Islands start-up APSU, is developing a reactor that uses a special technology to capture CO₂ in combustion engines, regenerating the elements that hold it (amines and zeolites) to prevent saturation and allow for greater efficiency and carbon footprint reduction.

Netzero IIOT is an initiative by the Catalan start-up Aeinnova that uses the Internet of Things (IoT) to develop maintenance-free and lithium battery-free autonomous industrial sensors that operate with long-range wireless and are powered by residual heat or wind.

Finally, *H2Mell* is a project for the selection of odorant and bio-odorants for hydrogen, with the aim of defining an international standard with a proposal that bears the Enagás brand and seal.

In addition to *Archydra* and *AZIM*, *H2Mell* is also an intraentrepreneurship project devised by Enagás professionals.

More open than ever

The fifth edition of the *Ingenia Energy Challenge*, organised by Enagás Emprende, Enagás' Corporate Entrepreneurship and Open Innovation Programme, was launched on 26 September 2023, within the framework of the Enagás Innovation Day event, with the aim of promoting ideas and projects in three main areas: renewable gases (with priority given to green hydrogen) and new transport fuels; sustainability and energy efficiency; and industry 4.0 and digitalisation.

All these areas covered by the competition are aligned with the different challenges and needs of the company, and both new business proposals – at any stage of development – and technical solutions to the challenges posed have been submitted.

The panel of expert judges is made up of members of the Enagás Executive Committee. Along with Arturo Gonzalo, the members are the Secretary General, Diego Trillo; the Business Development and Affiliates General Manager, Jesús Saldaña; the Director General of Energy Transition, Natalia Latorre; the Enagás Gas Assets General Manager, Claudio Rodríguez; the People and Transformation General Manager, Javier Perera; the Chief Financial Officer, Luis Romero; the General Manager of Engineering, Technology and Digitalisation, Susana de Pablo; Technical Management of the System General Manager, María Junco; and the Public Affairs & Investor Relations General Manager, Felisa Martín.

There are also three external judges. In addition to Silvia Bruno, the CEO of Axis (corporate venture capital vehicle of ICO), Guillermo Jiménez; and the Partner and CEO of Private Capital, Energy Transition and Technology at Alantra, Patricia Pascual.

At the closing ceremony, Jesús Saldaña expressed his opinion that in this edition of the *Ingenia Energy Challenge*, “innovation is more open and collaborative than ever”, and stressed that “both internal and external talent is necessary to achieve our goals of decarbonisation and security of supply”, creating “an ecosystem where technology centres, corporations, entrepreneurs and intraentrepreneurs work together”.

More information on the [Ingenia Energy Challenge website](#).

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