

New TECNALIA start-up to support roll-out of hydrogen economy

- *Hydrogen is set to play a major role in accelerating the energy transition, as well as being an essential component in the energy mix of the future and decarbonisation strategies, not just for energy and transport, but also from industrial processes where it is already in use.*
- *The new company, H2SITE, to be located in Bizkaia province (Spain), is the result of a partnership between TECNALIA, ENGIE Group headquartered in Paris and the Eindhoven University of Technology (TUE). It marks the first time ENGIE New Ventures, one of the world's leading funds in the utilities sector, invests in a start-up in Spain.*
- *The main innovation of H2SITE lies in developing technology for small and medium-scale distributed hydrogen production, whereby high purity and low-cost hydrogen is produced using advanced membrane reactors.*

Derio, 5th of March 2020. Hydrogen is set to become a key element for the decarbonisation of the energy, industry and mobility for the acceleration of the energy transition towards a low-carbon economy that helps to overcome one of the main challenges of renewable energy production: intermittent production unrelated to the demand. Hydrogen is not produced from renewable sources, instead being obtained from natural gas reforming processes in large centralised plants. This derives in high economic and environmental costs, due to its compression and transport to its points of use.

In this context, TECNALIA, the Research and Technology Organization; and the Eindhoven University of Technology (TUE) have been working together for 10 years on the file of high purity hydrogen production. They have recently been joined by ENGIE, a world's leading company in the energy sector. The result is H2SITE, an industrial start-up set up to increase production of high-purity hydrogen using more efficient and more cost-effective technology. This is also the first time that one of the world's leading funds in the utilities sector, ENGIE New Ventures, invests in Spain.

At the same time, the three entities (ENGIE, TUE and TECNALIA) have signed a stable partnership agreement for the hydrogen segment that, overall, will draw funds and top-line skills to the Basque Country in such a strategic field for the region.

H2SITE, a ground-breaking venture

The start-up, located in Bizkaia and supported by the Bizkaia Provincial Council, will have an initial workforce of three people throughout its first year of activity. H2SITE will supply high-purity, low-cost distributed hydrogen on a small and medium scale for stationary applications (industrial uses, combined electricity and heat generation, etc.), isolated areas (islands, areas without access to the grid, etc.) and mobility. In this regard, it will contribute to the roll-out of 100% green electric mobility, opening the way for on-board hydrogen production systems on vehicles themselves. As a hydrogen technology platform, H2SITE will be capable of producing hydrogen from a range of compounds, such as biomethane, ammonia, bioethanol, etc.

To do so, it will use a technology developed by TECNALIA and TUE, based on process intensification, using advanced membrane reactors to maximise the efficiency of the hydrogen production process and minimise the use of resources (energy, space, raw materials, etc.).

For industrial clients, H2SITE will offer reductions of up to 40% off their current hydrogen bills, while also minimising environmental impact and sidestepping the regulatory and safety problems associated with storage, as hydrogen will be produced on site and on demand.

The mission of the start-up is to become a leader in green hydrogen production and a lever for the much-needed energy transition. With this in mind, the challenge is to become the primary supplier of hydrogen produced on site for industrial use in stationary applications in priority industrial sectors, such as the chemical industry, the food industry, iron and steel, glass and electronics, all of which jointly account for a large share of regional and national GDP.

Teamwork, the key to success

H2SITE is the consequence of a partnership between a university, a technology centre, a pioneering energy company, a top line investor and an entrepreneurial build-up with technologists and managers who have made the start-up possible.

In this case, TECNALIA contributed its advanced technological knowledge, developed over 10 years and transferred to the new company in the form of three families of patents via TECNALIA Ventures, the centre's venture builder. The new start-up is the 12th industry-oriented company set up by TECNALIA in recent years through TECNALIA Ventures. The strategy developed by TECNALIA in the field of gas separation membranes was also key to setting it up. This technological excellence combines with the strategic partnership with the Eindhoven University for Technology to develop advanced membrane reactors.

About TECNALIA

TECNALIA is a European benchmark Research and Technology Organization; with 1,400 experts from 30 different nationalities focused on transforming technology into GDP to improve People's quality of life, by creating business opportunities for companies. TECNALIA Ventures is TECNALIA's venture builder. It manages technological assets' life cycle, transferring them to the market either creating technology-based companies or licensing industrial property.

About ENGIE and ENGIE New Ventures

ENGIE is a global reference in low-carbon energy and services, with ambition to become the world leader in the zero-carbon transition "as a service" for customers. ENGIE relies on key activities (renewable energy, gas, services) to offer competitive turnkey solutions. ENGIE has 160,000 employees and a turnover in 2019 of 60.1 billion Euros. The Group is listed on the Paris and Brussels stock exchanges (ENGI). ENGIE New Ventures (ENV) is the corporate venture arm of ENGIE, the global energy and services provider. ENV is a €180 million fund focused on making minority investments in high-performing startups. ENV has deployed €125 million of capital across 25 investments. ENV's offices are in Paris, Singapore, Tel Aviv and San Francisco.

For further information:

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