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Press Release

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Bilfinger is developing an efficient solution for hydrogen storages and thus helping to reduce dependence on natural gas

- **Bilfinger delivers hydrogen treatment solution for long-term storage and injection into pipelines**
- **Based on decades of experience in natural gas drying, Bilfinger impresses with efficient and proven solution for large-scale drying of hydrogen**
- **The innovative research project includes a demonstration plant for the absorption drying of hydrogen**

Cloppenburg, Germany. Bilfinger is developing a demonstration plant for the drying of green hydrogen. The joint project with the Institute of Thermodynamics at Leibniz University in Hanover and EWE GASSPEICHER GmbH is being sponsored by the German federal state of Lower Saxony and is an important part of Germany's energy transition. The process allows the efficient and large-scale hydrogen treatment for the storage and subsequent on-demand injection of hydrogen into pipelines. The plant will be delivered to Rüdersdorf in eastern Germany in early 2023.

The new process uses a suitable process liquid that dries hydrogen by absorbing moisture. Bilfinger is drawing on its many years of experience and expertise with a process that is already used on a large scale for natural gas in gas storage and has proven its reliability and efficiency over the course of several decades.

The storage of green electricity – i.e. electricity from renewable sources such as wind and sun – is a major challenge of this day and age. Hydrogen is an important storage medium. Electrical power is converted into hydrogen and will be stored safely and for the long term in so-called caverns in deep layers of the earth, similar as for natural gas. EWE GASSPEICHER is currently working on this proof in a research project in Rüdersdorf. The hydrogen must then be dried before it can be injected into pipelines and transported further. The technology used by Bilfinger allows for large-scale treatment of hydrogen that is both economical and efficient. After it is withdrawn from storage – for example from a cavern – the hydrogen is dried and then either immediately converted back into electricity or fed into the pipeline. Consumers can thus be supplied with energy as flexibly as is the case with natural gas.



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“The implementation of this project is a major step forward in the energy transition. Decentralized hydrogen drying through absorption for gas storage and pipeline injection is an important step for the hydrogen economy. This technology allows hydrogen to be treated economically on a large scale and enables renewable energies to be integrated into our energy system. Hydrogen produced with the help of wind and solar power or hydrogen that is about to be stored in caverns can thus be fed into the transport grid”, says Olaf Lies, Lower Saxony’s Minister of Environment.

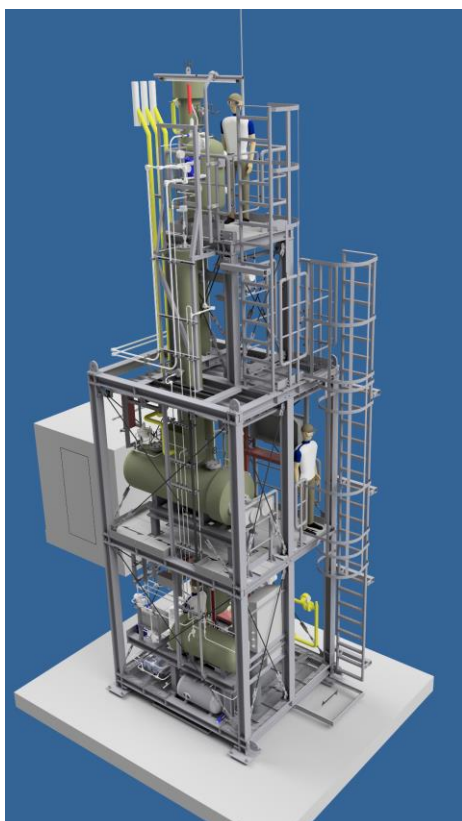
The project is being carried out by [Bilfinger Engineering & Maintenance GmbH](#), which is located in the Northern German city of Cloppenburg. The company is responsible for the design and manufacturing of the plant. “With this innovative development, we are now putting the experience we have gained in recent decades – a time in which we have built natural gas drying plants throughout Europe – to good use for the energy transition through green hydrogen, and we are grateful for the funding of the project by the Lower Saxony Ministry of the Environment”, says Karsten Hoffhaus, Chief Operating Officer at Bilfinger Engineering & Maintenance GmbH.

Other partners in the project include the Institute of Thermodynamics at Leibniz University in Hanover, which is providing scientific support, and EWE GASSPEICHER GmbH, at whose storage facility the hydrogen drying process will initially be operated and tested. Following this test phase, the plant will be integrated into hydrogen production in 2023 / 2024 so that hydrogen can be dried before being injected into pipelines.

Bilfinger provides services throughout the entire [hydrogen value chain](#) – from production, storage and delivery through to utilization. Services cover consulting and engineering, subsequent plant construction as well as design and build services (general contractor) and all maintenance and service activities. In the Netherlands for example, Bilfinger is currently responsible for basic engineering of a compressor plant for gas grid operator Gasunie to store hydrogen in underground caverns as part of the so-called [HyStock project](#).



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Picture: Bilfinger pilot plant for the drying of hydrogen

Bilfinger is an international industrial services provider. The Group aims to enhance the efficiency of assets, ensure a high level of availability, reduce emissions and lower maintenance costs. Creating sustainable production processes for customers is becoming increasingly important. Bilfinger's portfolio covers the entire value chain from consulting, engineering, manufacturing, assembly, maintenance and plant expansion to turnarounds and also includes environmental technologies and digital applications.

The company delivers its services in two service lines: Engineering & Maintenance and Technologies. Bilfinger is primarily active in Europe, North America and the Middle East. Process industry customers come from sectors that include chemicals & petrochemicals, energy & utilities, oil & gas, pharma & biopharma, metallurgy and cement. With its ~ 30,000 employees, Bilfinger upholds the highest standards of safety and quality and generated revenue of €3.7 billion in financial year 2021.

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