ENERGIEPARK BAD LAUCHSTÄDT

Gefördert durch:
Bundesministerium für Wirtschaft und Klimaschutz
aufgrund eines Beschlusses des Deutschen Bundestages

Press release

Franziska Freytag
Telephone: +49 341 443-5733
presse@energiepark-bad-lauchstaedt.de

c/o VNG AG
Braunstraße 7, 04347 Leipzig
P.O. box 24 12 63, 04332 Leipzig
info@energiepark-bad-lauchstaedt.de
www.energiepark-bad-lauchstaedt.de

Project lead in consortium:
Cornelia Müller-Pagel

Energiepark Bad Lauchstädt on the final stretch: Electrolyzer for producing green hydrogen takes shape

First electrolysis stacks for industrial-scale production of climate-neutral hydrogen arrived

Bad Lauchstädt, 14.10.2025. With the delivery of the first electrolysis stacks, the Bad Lauchstädt Energy Park has reached another milestone in the development of an industrially scalable and climate-neutral hydrogen economy. The technical commissioning of the 30-megawatt electrolysis plant is scheduled for the end of the year. This means that the real-world laboratory, which will supply the TotalEnergies refinery in Leuna with climate-neutral hydrogen, is nearing completion and demonstrates that economically viable H_2 projects are possible in Germany.

With the first stacks, the installation of the electrolyzer, which is being built by Uniper and VNG Handel & Vertrieb GmbH (VNG H&V), is beginning at the Energiepark Bad Lauchstädt. It is the heart of hydrogen production and the final piece of the puzzle that paves the way for green H_2 production in Bad Lauchstädt. Here, wind power and water are used to produce climate-neutral hydrogen – an energy carrier that can be stored and used flexibly. It is precisely this sector coupling that is the key to the energy transition.

Once the installation is complete, commissioning will begin. “This is an emotional moment for the project team, showing how far we have come. After commissioning, green hydrogen will be produced here on an industrial scale for the first time. Up to 4,000 tons per year,” explains **Cornelia Müller-Pagel**, spokesperson for the Energiepark Bad Lauchstädt Energiepark consortium. “This enables us to make an important contribution to supplying the Central German chemical triangle. Above all, however, the Energiepark demonstrates that hydrogen projects in Germany are not only technically feasible, but also economically viable – and thus can become a cornerstone of the energy transition.”

From electrolysis stack to large-scale modular plant

The pressure alkali electrolyzer at the Energiepark Bad Lauchstädt, developed and manufactured by Dresden-based specialist Sunfire, consists of three modules, each with a capacity of 10 megawatts. Each module is made up of two stacks, with each stack consisting of four blocks. The 12-ton electrolyzer blocks are delivered in 24 individual shipments, which are then delivered on site by flatbed trucks. “The stacks are the heart of the electrolyzer. Their delivery marks the transition from the construction to the implementation phase and is the result of months of hard work by the entire team,” says **Xenia Papst**, Senior Commercial Manager Hydrogen Germany at Uniper. "The stacks convert the renewable electricity from the wind turbines of the Energiepark into hydrogen – efficiently, modularly, and scalably. With each additional stack, the plant's output grows until we finally reach 30 MW and can connect the central component to the supply."

Aron Guttowski, Senior Manager Project Management Electrolysis at Sunfire, adds: "A real-world laboratory like this one demonstrates how valuable it is to work with strong partners. Together, we pool our many years of experience and expertise in the field of hydrogen, learn from each other, and strengthen each other. At the same time, it becomes clear that hydrogen technologies, such as those used in Bad Lauchstädt, are already working today and are ready for practical use in industry."

Signal effect for energy transition and industry

The hydrogen produced is transported to the TotalEnergies refinery 25 kilometers away via a former natural gas pipeline belonging to ONTRAS Gastransport GmbH – a concrete example of how fossil fuels and infrastructure can be repurposed for climate-neutral alternatives. The Energiepark Bad Lauchstädt is one of the largest pilot projects of its kind in Europe and demonstrates how renewable energies, modern electrolysis technology, and transport solutions can be combined into an integrated system that paves the way for a climate-neutral economy. “With the start of electrolysis, we are not only securing the next technological leap, but also the long-term economic viability of the energy park,” emphasizes **Sebastian Pflüger**, Senior Project Manager Hydrogen at VNG H&V. “Green hydrogen is not only produced here, but also used directly on site – this creates value chains that are attracting international attention.” For the first time, the entire green hydrogen process chain is being tested on an industrial scale in the real-world laboratory in Bad Lauchstädt – from production using renewable electricity to use in the regional chemical industry. The project is thus not only contributing to decarbonization but also strengthening the innovative power and competitiveness of Central Germany as an industrial location. But the Energiepark Bad Lauchstädt is also sending a strong signal beyond the region's borders: it shows how ambitious climate targets can be advanced through concrete industrial implementation.

Further information about the Bad Lauchstädt Energy Park is available here: energiepark-bad-lauchstaedt.de/en/

You can find images and video material here

About the project:

The Bad Lauchstädt Energy Park is a large-scale real-world laboratory for the production, storage, transport, marketing, and use of green hydrogen. As a real-world laboratory for the energy transition, it is the first to test the entire value chain of green hydrogen on an industrial scale. Green hydrogen is produced using a 30 MW large-scale electrolysis plant from Sunfire, which utilizes renewable electricity from the nearby wind farm. In the future, the green hydrogen will be temporarily stored in a specially designed salt cavern. Already today, the green hydrogen can be fed into the hydrogen network of the chemical industry based in central Germany via a converted gas pipeline and, in the future, used for urban mobility solutions. The real-world laboratory is thus contributing to researching these future technologies related to green hydrogen and bringing them to market maturity – for a technologically strong and future-oriented hydrogen region in central Germany and successful sector coupling throughout the Federal Republic. To this end, the project partners are investing a total of €220 million, which includes €44 million in funding as a "real-world laboratory for the energy transition" from the 7th Energy Research Program of the Federal Ministry for Economic Affairs and Climate Protection (BMWK).

About the project partners „Energiepark Bad Lauchstädt":

***Terrawatt Planungsgesellschaft mbH** has been developing and implementing turnkey projects in the field of wind power and photovoltaics for over 25 years. Its many years of experience as a planner, investor, operator, and plant manager enable it to oversee the entire project implementation process from all perspectives, from site selection to turnkey handover of the plants, and to shape the individual project phases using its own expertise. In addition, the company is active nationally and internationally as a service provider and technical consultant and can draw on a wealth of experience from over 300 projects with more than 1,500 wind turbines.*

***Uniper**, based in Düsseldorf, is a European energy company with a global reach and activities in over 40 countries. With around 7,500 employees, the company plays a central role in ensuring a secure energy supply in Europe – particularly in its core markets of Germany, the UK, Sweden, and the Netherlands. With 14 gigawatts of flexible power plant capacity, Uniper is the backbone of reliable power generation. As a leading gas trader and one of the most important LNG importers in northwestern Europe, Uniper strengthens security of supply with a broad procurement portfolio. Uniper is also driving forward the transformation of the energy system by investing in renewable energies, hydrogen, and other forms of low-carbon energy sources.*

In its home market of Germany, Uniper supplies around 1,000 municipalities and industrial companies with energy and services. Uniper is also Germany's largest operator of gas storage facilities and hydroelectric power plants.

***VNG Handel & Vertrieb GmbH** (VNG H&V), based in Leipzig, supplies domestic and foreign trading companies, distributors, municipal utilities, power plant operators, and industrial customers with natural gas in a reliable and flexible manner. Innovative products, diverse services, and customized concepts for environmentally friendly energy supply offer comprehensive support for the implementation of the energy transition. With sales offices throughout Germany and neighboring countries, holdings and business contacts in large parts of Europe, and as a VNG AG company, VNG Handel & Vertrieb GmbH is always close to its customers and well positioned internationally.*

***VNG Gasspeicher GmbH** (VGS) is a wholly owned subsidiary of VNG AG based in Leipzig. As the third-largest storage operator in Germany, the company and its wholly owned subsidiary Erdgasspeicher Peissen GmbH provide a total capacity of around 31 TWh in storage facilities at several locations, particularly in eastern Germany.*

The geographical location and grid connection of the underground gas storage facilities enable non-discriminatory access to the important European trading market Trading Hub Europe. VNG Gasspeicher GmbH stands for innovative products and individual product combinations that are consistently market-oriented with flexibility and reliability.

***ONTRAS Gastransport GmbH** operates the 7,700-kilometer transmission network in eastern Germany and is responsible for the reliable and efficient transport of gaseous energy – today and in the future. We are actively shaping the energy market of the future, contributing ideas and developing sustainable solutions for our infrastructure. In doing so, we rely on reliable technology, many years of experience, and our most important asset: a dedicated team! Our gas infrastructure is compatible with renewable gases and thus also supports a wide range of applications for hydrogen, such as material applications, mobility, and heating. To make our infrastructure fit for a renewable gas supply, we are planning and implementing numerous projects together with partner companies.*

***DBI – Gastechnologisches Institut gGmbH Freiberg** is an independent research institute of the DVGW German Technical and Scientific Association for Gas and Water. It conducts research into the entire supply chain for gaseous energy sources in numerous projects. Since 2005, it has been working on numerous projects for the integration of green hydrogen. Its experience ranges from technological aspects of underground gas storage, transport, and gas quality assurance to hydrogen utilization technologies in industry and households and their impact on the German and European energy supply system.*

***VNG** is a Europe-wide group of companies with over 20 subsidiaries and around 1,900 employees. Headquartered in Leipzig, the group is a gas importer and wholesaler as well as an operator of critical gas infrastructure, ensuring a secure gas supply in Germany. With its "VNG 2030+" strategy, VNG is also pursuing an ambitious path toward a market ramp-up of renewable and decarbonized gases such as biogas and hydrogen, paving the way for a sustainable, secure, and ultimately climate-neutral energy system of the future.*