4
storage facilities
are operated by VNG Gasspeicher GmbH and Erdgasspeicher Peißen GmbH (EPG).

Our gas storage facilities

THE INVISIBLE GUARDIANS OF ENERGY SECURITY

As we have all been acutely aware since the 2022 energy crisis, gas storage facilities are extremely important for a reliable gas supply. Our subsidiary, VNG Gasspeicher GmbH (VGS), together with EPG, provides the necessary infrastructure with four underground gas storage facilities and up to 2.7 billion cubic metres of storage capacity so that sufficient energy is always available when it is needed.

PROTECTED SPACE FOR THE GAS SUPPLY

Gas storage facilities play a central role in the German gas market. They serve as a physical source of natural gas, and ensure grid stability and security of supply by balancing out seasonal fluctuations and providing a buffer for short-term market changes – be these due to extreme weather conditions or geopolitical crises.

In addition, they enable traders to store purchased gas for later sale. In this way, they contribute to price stability and market flexibility.

With the increasing integration of renewable energies into the energy system, storage systems are also gaining in importance. Cavern storage facilities in particular could be used as the hydrogen storage facilities in future and in this way support the transition to a climate-neutral energy supply. They therefore remain a central component of the energy transition and an energy supply of the future, as well as an indispensable instrument in gas trading.

HUGE ENERGY STORAGE CAPACITIES

With 45 underground storage facilities, Germany has the largest total gas storage capacity in Europe. The facilities have a storage capacity of 23.3 billion cubic metres – a quarter of Germany's annual consumption. In a mild winter, completely filled gas storage facilities would cover demand for around two to three months. VGS is one of the largest storage operators in Germany. In the VNG Group, we have over 50 years of experience in reliable, flexible and efficient gas storage. Today, VGS offers storage capacities and customised services, from dispatching to metrological services.

GAS STORAGE: THE KEY TO THE ENERGY TRANSITION

In contrast to electricity, gas can be stored easily in large quantities over long periods of time. Gas storage facilities can thus serve as a bridge between sun, wind and energy consumption. For example, electricity from renewable energy sources such as wind power or photovoltaics can be used in electrolysers to produce hydrogen. This hydrogen can be stored in suitable gas storage facilities and accessed flexibly; for example, to generate CO_2-neutral electricity again. The gas storage facilities can therefore act as huge batteries for electricity generated from renewables. Our storage systems provide a constant supply of energy even at times when neither the sun shines nor the wind blows.

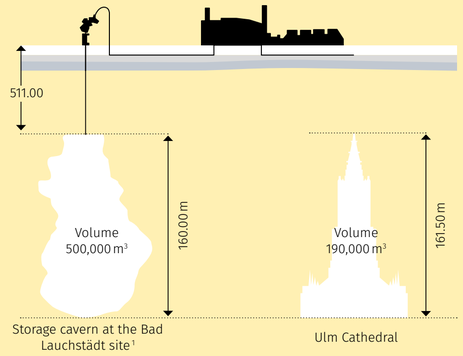
We are testing this value chain at production scale in the **Bad Lauchstädt Energy Park**. Hydrogen generated with wind power is to be stored there in appropriately adapted storage facilities.

ENERGY FOR TODAY AND TOMORROW

Gas storage facilities are more than just reserves – they are indispensable for a secure energy future. With VGS as a partner, we provide the infrastructure that will create grid stability, security of supply, scope for gas trading and a sustainable energy supply.

2.7
billion m³
is the storage capacity of the VGS storage facilities.

Comparison of the dimensions of an H_2 cavern at the Bad Lauchstädt underground gas storage facility



¹ The overpressure enables a storage capacity of around 50 million cubic metres of hydrogen.

Hydrogen storage in Bad Lauchstädt

With the GO! Storage Project, a sub-project of Green Octopus Central Germany, the plan is to adapt one of a total of 17 existing natural gas caverns in Bad Lauchstädt for hydrogen storage. The cavern, which has a storage capacity of up to 50 million cubic metres of hydrogen, will later also be connected to the Germany-wide core network.

The project received funding from the IPCEI programme (Important Projects of Common European Interest) in 2024. This EU initiative supports key projects that are of particular importance for Europe's economic and technological development.

Storage infrastructure for the future

VGS contributes decades of experience with underground storage facilities. Managing Director Bernd Protze emphasises: "The storage infrastructure in Central Germany plays a key role for the German gas supply. Today, natural gas is stored in our storage facilities; in the medium to long term, it is likely to be hydrogen."