

# VNG

**VNG GASSPEICHER GMBH**  
RELIABLE AND FLEXIBLE IN THE GAS MARKET

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# TIMES ARE CHANGING. NATURAL GAS IS HERE TO STAY.

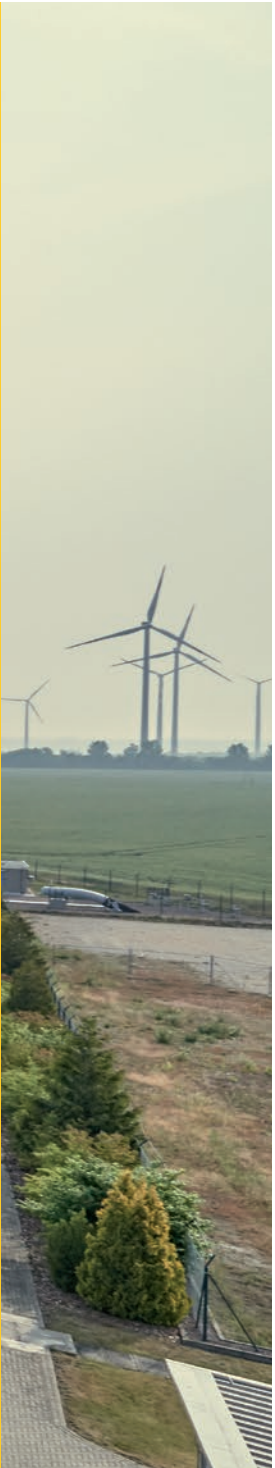
An energy revolution in Germany. The historical Paris Agreement on Climate Change. The energy industry undergoing radical changes and a supply chain that is evolving in great strides: away from fossil and nuclear fuels. Towards power, heating and mobility accomplished renewably. And towards even better energy savings and efficiency. And what does this all mean for natural gas?

Natural gas is at an advantage due to excellent existing infrastructure. It can be delivered easily and practically to nearly any customer. Gas is also a natural partner for the energy revolution: Having a relatively low CO<sub>2</sub> balance when compared to other fossil fuels, gas is able - even today - to contribute to decarbonisation. Natural gas is becoming ever more sustainable - in particular due to the power-to-gas process. When these synthetic gases are also stored, they form a considerable building block in providing a safe, renewable energy source for the future.

## HOW STORAGE WORKS.

Natural gas storage facilities and pump storage power plant are the only options available in the storage of large energy volumes. Many practical applications such as power-to-gas are currently being explored at the political level. And all the while, the natural gas industry is working to refine the necessary economical and technical aspects.

With half a century of experience creating and operating underground storage facilities, we've learned a thing or two about storing natural gas safely, reliably and efficiently. This knowledge is now being used to do the same with other regenerative, sustainable energy supplies of the future.







## ■ EXPERIENCE FOR TODAY. AND TOMORROW.

As a fully owned subsidiary of VNG – Verbundnetz Gas Aktiengesellschaft (VNG AG) in Leipzig, we possess nearly 50 years of experience creating and operating underground storage facilities. Safely, reliably and efficiently. High standards, which we live up to on a daily basis. With highly qualified on-site teams at the facilities. With state of the art remote technology. And with integrated quality and security management.

In us, you find a single source of expertise in everything you need to know: project management, capacity marketing, technical and contractual operation and invoicing. The foundation for our success? Our team of over 100 employees. All of whom are dedicated to creating competitive solutions which fit you – and your needs – perfectly.

### BETTER THAN EXPERTS? MORE EXPERTS.

In storage, it is often customised solutions that make the difference. This is why we utilise a pool of specialised engineers. Experts in individualised services for systems, instrumentation and storage facility operations. At the same time we are constantly working with partners in the marketplace as well as scientific institutions to further develop and improve our facilities and the technology we use.

Trust in Strength: as Germany's third-largest storage operator, we offer a total of 2.4 billion cubic meters of capacity – combined with an excellent geographical location and network connectivity providing access to all of Europe's most important trading markets.

### WE MAKE YOU MORE AGILE.

We understand a lot about energy. And marketplaces. We also know what's important in the ever shifting energy market. Our cavern and depleted reservoir facilities offer maximised storage flexibility. Thanks to their differing injection and withdrawal properties, we – and therefore you – are able to react precisely as the market demands. The flexible, innovative storage products and services provided by VGS let you better take advantage of good opportunities more quickly.





FROM LEFT TO RIGHT:  
MADLEN GEYER, BERND PROTZE,  
WINFRIED BECKER, KASSANDRA HARTMANN,  
JENS PASSERN, MARC KÖGEL, KAY OKON,  
MONIKA HAMBSCH, SUSANNE SCHMIDT



## ■ TOUGH. EXPERIENCED. QUALIFIED.

VNG Gasspeicher, as it is now, first came to be in March of 2012. However, the experience we bring with us goes back much further. An edge which the entire team shares in: distinctive skills, a wide array of strengths and the knowledge that each individual possesses form the foundation for successful teamwork. Within VGS. With our Partners. And with you. Let's get to know each other!

**BERND PROTZE** – Managing Director – orients the company for success at the German and European market levels and provides a single source for the entire storage process chain; flexible products and services – with an European perspective and a close eye on regenerative energies.

**JENS PASSERN** – Head of Dispatching & IT – manages smooth settlement of storage contracts. His team is available around the clock so that contracts are being monitored at all times.

**KASSANDRA HARTMANN** – Human Resources – knows that dedicated, qualified personnel are the key to any business success. Works to ensure that personal and professional lives may be properly balanced.

**KAY OKON** – Head of Project and Asset Management – guides co-operative and investment projects, develops business models for the long-term implementation of company resources and creates the annual investment and expenditure programme.

**MADLEN GEYER** – Head of Marketing – drives the further development of storage products and services, coordinates legal support for sales and knows the clients, and their needs, inside and out.

**MARC KÖGEL** – Head of Commercial Administration – keeps a close eye on the company's figures: his responsibilities include contract invoicing, strategic corporate planning, quality assurance within the company's various business units and coordination of annual financial statements.

**MONIKA HAMBSCH** – Quality and Safety Management – monitors and ensures the quality, safety and environmental friendliness of all processes.

**SUSANNE SCHMIDT** – Regulation & Policy Issues – actively follows regulatory developments for storage facility operators at the federal and European levels and ensures proper legal compliance.

**WINFRIED BECKER** – Head of Operations – guarantees reliable and efficient processes during natural gas storage. To this end, he works on many fronts to optimize storage facility performance and to ensure that they are operated and maintained economically, efficiently and safely.







## ■ 2.4 BILLION CUBIC METERS. FOR YOU.

As a European storage operator with roots in central Germany, we are right there where you want to be working. Our storage facilities are connected to the most important European gas markets allowing us to reach customers across the entire continent. Having a current total capacity of 2.4 billion cubic meters, or about 30 terawatt hours, means supplying energy to around one million households – for an entire year.

Our customers are as unique as that which we offer. They operate power plants. Import natural gas. Supply industry or single families with energy. Or they trade with gas on the exchange. One thing they all have in common: the need for utmost flexibility. With this in mind we develop innovative products and services which fit you better. But how? With real market proximity. And with long years of experience in the gas storage industry and the safe, reliable operation of its systems and facilities.

## TWO FOR JUST ABOUT ANYTHING.

We have combined our two largest storage facilities, Bad Lauchstädt and Bernburg, to form one single storage zone for you: the VGS Storage Hub. Located within the GASPOOL market area, it measures a capacity of two billion cubic meters, four-fifths of our total volume. These two, highly versatile cavern storage facilities provide you with an extremely beneficial and flexible position on the marketplace. So that you can operate and react more quickly – in any situation.

## EXACTLY WHAT YOU NEED. AND QUITE A LOT MORE.

Having various types of storage available in our portfolio translates to a wide range of real world possibilities. This allows for the reliable balancing of seasonal fluctuations on the heating market or gas can be withdrawn unexpectedly, as needed, on cold winter days – one part in ensuring the stability of energy supplies.

One other example: transmission system operators can store both control- and balancing-energy with us, thereby guaranteeing stable network pressures at all times. In turn, producers can supply natural gas consistently and use underground storage to deal with fluctuations in demand and withdrawal.

Power plants and industrial facilities use natural gas storage to not only ensure that their annual energy needs are taken care of but that sudden spikes in demand are also covered easily as well. And traders? Their eyes are on the spreads and they need to act quickly, on short notice. Short renomination periods, variable injection and withdrawal access and close proximity to the European trading markets are what matter most to them.

Whichever group best describes you: we operate with your needs in mind. Today – and tomorrow. Because we respond to market impulses. On the European flexibility market just as we do with emerging applications. For instance, the storage of “green” natural gas (gas converted from electricity). We are closer than you think to intelligent solutions for tomorrow’s decarbonised world.

## ■ ONE OR THE OTHER. BUT ALWAYS YOURS.

The marketplace has become faster. What matters today is the ability to adjust flexibly. Our online booking platform “easystore” let’s you become your own product designer. Your advantage being that you can configure your products individually and tailor them to meet your precise needs. Simple direct booking – and immediate access.

Our clients also need a variety of gas transfer points: in addition to classic handling at entry/exit points at storage facilities in the GASPOOL or NetConnect Germany market areas, we also offer other alternatives such as our Hub products which allow for transfer of natural gas to us via virtual trading points (VTP).

Our range of products is wide reaching. As a result, you have more than simply a choice of which product fits best to you and your needs: *Medium-term* products are laid out over several storage years. This provides you with an excellent foundation – regardless of whether your storage needs are of a seasonal or trading nature.

Our *short-term* products make you especially agile. Micro and Pure offer high injection or withdrawal rates – a turnover of gas volumes within three to seven days. Seize opportunity and take advantage of price fluctuations on short notice: intelligent Day-Ahead and Within-Day products make this possible. They let you optimise your volumes for the next, or even the same, gas day. And all this free of characteristic curve restrictions.

**easystore**  
Configure. Request. Book.

## ■ MORE SERVICE? OF COURSE:

### REMIT

Storage customers are required to report the volume of gas stored on each gas day to the Agency for the Cooperation of Energy Regulators (“ACER”). We’ll take care of it and save time and effort for you.

### RETURNS

As natural gas storage experts, we are fully aware that sometimes certain storage capacities are simply no longer needed. The solution: in such cases we can re-introduce your storage capacities back into the marketplace.

### SECONDARY MARKETING

If we don’t have the necessary capacity available, we will inquire with other regular customers which might be able to meet your needs with “secondary” capacities.

### SECURITIES MANAGEMENT

If you would like to transfer gas assets to another secured party, we are glad to assist. Upon request, we will monitor the fill level of your storage contract. In this way we protect everyone’s interests – yours and those of the security provider.

### CONCLUSION OF IN-STORAGE GAS TRANSACTIONS

You have a lot of fixed capital: gas in storage. We allow for the easy sale and purchase of gas stored with us. Along with a suitable partner, you can reduce your financing expenses – and create new opportunities and room to manoeuvre.



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## ■ KNOW HOW & EXPERIENCE: ON DEMAND.

### Facility Operation

Storage facilities are our métier. We know the typical systems. And the particulars specific to aquifer, depleted gas field or cavern storage facilities. We operate each with the highest degree of professional reliability and efficiency – and your facilities as well including any equipment above or below ground, network connections or process control systems. We are also happy to provide customised services. Simply create your own, individually designed service package:

- Storage Operation
- Shut down and Emergency Management
- Capacity management
- Planning for Maintenance
- Procurement / Stock Management
- Commercial Dispatching
- Project management for Investments and Optimisation
- Documentation
- Surveying
- Geological Analysis/Probes
- Characteristic Curve Calculation
- Supervision of caverns
- Administrative services (reporting, operational planning, communication with authorities)

### Project Management

When you spend several decades studying the creation, operation and refinement of storage facilities, you find convincing and outstanding solutions – particularly in the face of shifting conditions and an ever-changing world. Profit from our experience. In the realisation of project ideas. In day-to-day operations. And in the future.

Our project management focuses particularly on the most critical areas such as planning and bid tendering procedures – but also on timelines and expense as well. We're also able to serve as reliable partners during the approvals process – acting as your principal, to mediate with any planners or contractors involved.

You can count on the extensive experience we have with new and replacement investments and complex renovation projects. And in handling the total dismantling of storage facilities. Some of the ways that we make sure your underground infrastructure is well taken care of.



#### **Your VGS Expert:**

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## Meterological System Services

Our engineers are with you from the very beginning. We consult during planning, carry out operational startups, or revisions and calibrations. And our DVGW auditing, certification operations and metrology and technical services ensure the necessary precision and safety.

Profit from our extensive knowledge base, regardless of whether you are in public utilities, chemical plants or the operator of biogas plants or power grid and storage systems. We carry out DVGW certification throughout Germany and are there for you as state certified inspectors in Hamburg, Berlin, Brandenburg, Mecklenburg-Western Pomerania, Schleswig-Holstein, Saxony and Thuringia.



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## Dispatching

The smooth operation and supervision of your systems. The conclusion of all your storage contracts. Our specialist teams are at your side to keep everything running just the way you want it – around the clock. And proactively.

The operations team handles availability scheduling for your technical facilities; working at all times to minimise bottlenecks or limitations for you and your customers.

The operative processing team monitors your customers’ contracts around the clock. They work using a client-supportive system – and a great deal of know-how.

This includes not only the matching process with network operators but also the operative contractual nomination and characteristic curve checks. And we create and submit the ACER facility reports.



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