

Annual Report 2023

CREATING ADDED VALUE

TOGETHER

TRANSFORMATION

SECURITY OF SUPPLY

STRUCTURAL CHANGE



Present in five countries

From its headquarters in Leipzig, VNG operates an extensive Group network with subsidiaries and holdings in Germany, Poland, the Czech Republic, Austria and Italy.

- BALANCE Erneuerbare Energien GmbH
- GDMcom GmbH
- Geomagic GmbH
- Infracon Infrastruktur Service GmbH & Co. KG
- MGMTree GmbH
- MoviaTec GmbH
- ONTRAS Gastransport GmbH
- VNG AG
- VNG Gasspeicher GmbH
- VNG Handel & Vertrieb GmbH
- VNG Innovation GmbH

KEY PERFORMANCE INDICATORS

| | 2023 | 2022 |
|--|-------|-------|
| Number of employees at the end of the year ⁴ | 1,688 | 1,578 |
| Group companies and holdings | 68 | 68 |
| Number of European countries in which VNG holdings operate | 5 | 5 |
| Gas sales in billion kWh | 378 | 588 |
| Pipeline network in km | 7,700 | 7,700 |
| Storage capacity in billion m ³ | 2.4 | 2.2 |

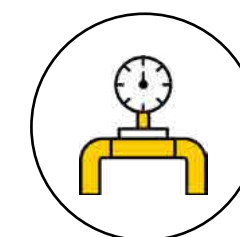
1 Before application of the IFRIC agenda decision on IFRS 9.
 2 EBIT adjusted to eliminate extraordinary and one-off effects on results.
 3 Funds from operations, i.e. consolidated earnings adjusted for non-cash expenses and income as well as gains / losses from the disposal of fixed assets.
 4 Total employees of all fully consolidated companies; as of: 31/12/2023

Our business areas



TRADING & SALES

As one of Germany's major gas importers and gas traders, **VNG Handel & Vertrieb GmbH** (VNG H&V) offers a wide range of products and services to around 400 municipal utilities and industrial companies. VNG H&V has deep regional roots and has holdings in companies in Germany and abroad.



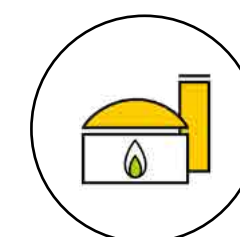
TRANSPORT

The independent transmission system operator **ONTRAS Gastransport GmbH (ONTRAS)** operates the 7,700-kilometre high-pressure pipeline system in Eastern Germany and is responsible for the reliable and efficient transport of gas. ONTRAS supports the European gas market and makes an important contribution to security of supply. ONTRAS is also a pioneer in hydrogen projects in the gas network.



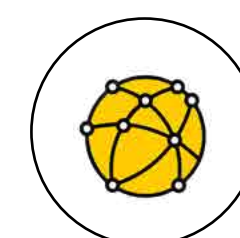
STORAGE

Underground storage facilities are an integral part of the gas infrastructure and essential for the security of supply. The Group subsidiary **VNG Gasspeicher GmbH (VGS)** – the third-largest gas storage operator in Germany – efficiently, safely and reliably stores its customers' gas, successfully markets storage capacities and offers innovative storage products.



BIOGAS

BALANCE Erneuerbare Energien GmbH (BALANCE) operates 40 biogas facilities in Eastern and Northern Germany. The production of green energy is just as much in focus as the intensification of value creation and the development of new products related to biogas and biomethane.



DIGITAL INFRASTRUCTURE

The Digital Infrastructure division, which was only established in 2022, bundles the activities of several subsidiaries and joint ventures. Its activities range from the fibre optic backbone and the fibre optic distribution network to services related to digital infrastructure.

KEY FINANCIAL FIGURES

| in € million | 2023 | 2022 |
|-----------------------------|--------|--------|
| Billed revenue ¹ | 23,196 | 36,237 |
| Adjusted EBIT ² | 447 | -205 |
| Consolidated result | 380 | -337 |
| FFO ³ | 486 | -197 |
| Gross investments | 197 | 128 |
| Net investments | 189 | 122 |
| Net financial liabilities | 970 | 7 |
| Equity ratio (%) | 24 | 13 |

HELPING SHAPE THE ENERGY TRANSFORMATION

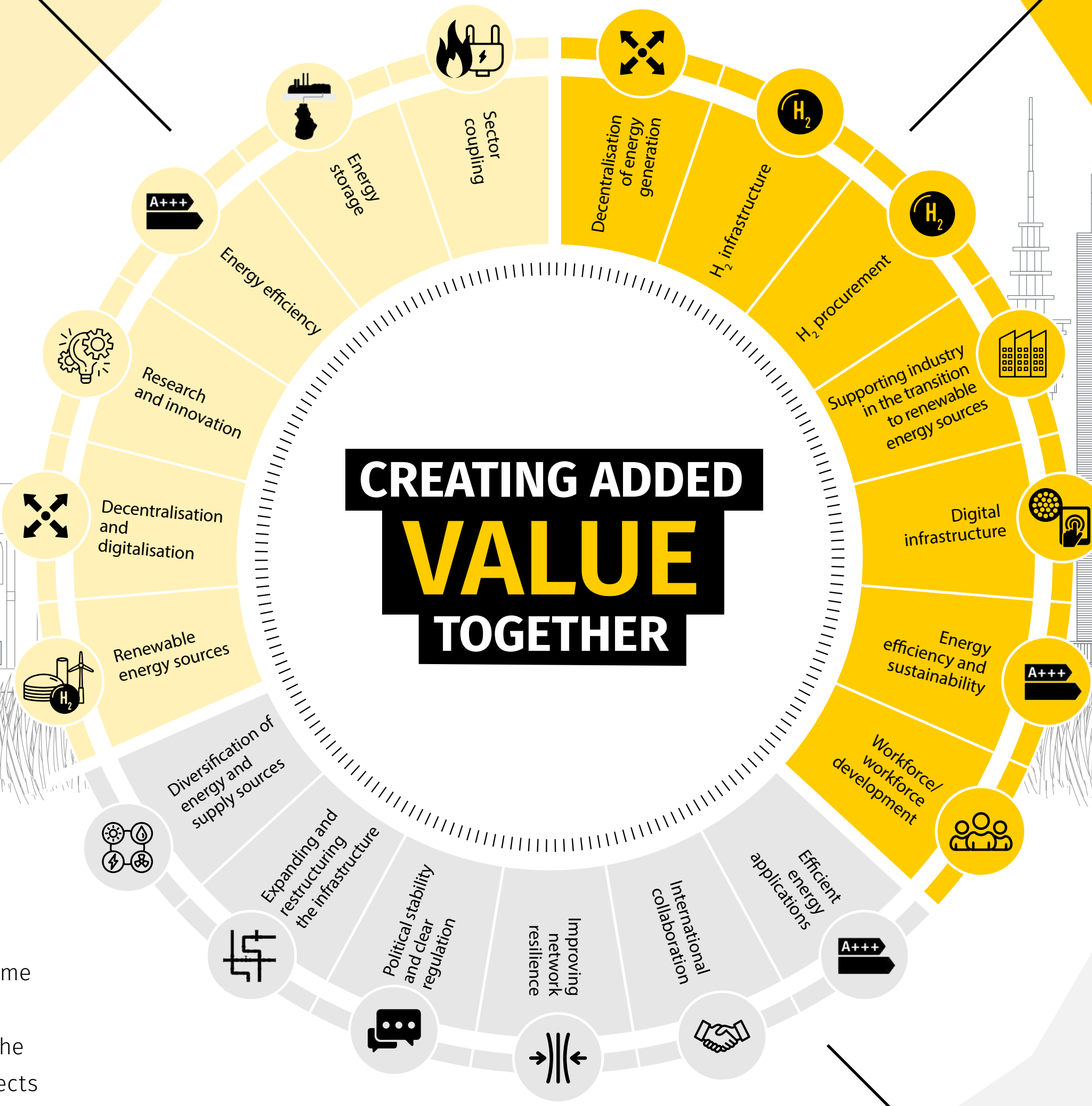
We are helping shape the energy transition and driving the transformation from fossil gas to a renewable and decarbonised supply of biogas and hydrogen (H₂). Our projects extend all the way up and down the gas value chain. In realising these projects, we leverage experience gained over decades and work together with expert partners.

► Page 18

SUPPORTING STRUCTURAL CHANGE

As a structurally significant company in Eastern Germany, we want to maintain the strength of the regional economy, and contribute to the prosperity and quality of life of society with our investments in modern infrastructure, green gas projects and our social commitment.

► Page 29



Closely connected

As a Leipzig-based company, VNG feels closely connected to its home region and makes an important contribution to the future viability of the regional economy in Eastern Germany. We create value for the region with customised solutions and various projects. These projects have three dimensions: **security of supply, transformation** and **structural change**.

SECURING ENERGY SUPPLIES

We see ourselves as a key player in securing supplies of gas in Eastern Germany. Accordingly, we ensure that our customers always receive the energy they need, both now and in the future. We guarantee this with diversified sources of supply, the reliable operation of our gas infrastructure and international partnerships.

► Page 12

Contents

02 About VNG

- 02 Present in five countries
- 02 Our business areas
- 03 Chart: Creating added value together
- 05 Introduction
- 09 Report by the Supervisory Board

12 Securing Energy Supplies

18 Helping Shape the Energy Transformation

29 Supporting Structural Change

38 Group Management Report

- 39 VNG at a glance
- 43 Report on economic position
- 47 Human resources and organisation
- 50 Performance of VNG's business areas
- 55 Financial position, performance and cash flows
- 59 Opportunities and risk report
- 64 Outlook

65 Consolidated Financial Statements

- 66 Consolidated statement of profit or loss
- 67 Consolidated balance sheet
- 68 Other disclosures
- 69 Consolidated companies
- 70 Independent auditor's report

74 Service

- 75 Glossary
- 77 Publication details



SECURITY OF SUPPLY

- 13** Security of supply is in our DNA
- 15** Securing energy supplies – today and tomorrow



TRANSFORMATION

- 19** Tiny particles for a massive transformation
- 21** Future projects of VNG
- 22** Hydrogen flagship project for the energy transition
- 24** Our projects for hydrogen production
- 25** Our hydrogen projects for import, transport and storage
- 27** Our projects for biogas and biomethane



STRUCTURAL CHANGE

- 30** Shaping structural change, securing prosperity
- 32** Eastern Germany ready for structural change
- 33** Hydrogen projects from the Baltic Sea to Leipzig
- 34** Driver of digitalisation
- 35** Biogas: Regional added value
- 36** Social commitment in Eastern Germany

This table of contents is interactively linked – just like the menu above.

Introduction

DEAR SHAREHOLDERS AND BUSINESS PARTNERS, DEAR FRIENDS OF THE GROUP,

We can look back on an eventful financial year. We were able to put the crisis year 2022 behind us and emerge stronger than ever in 2023. As an organisation, we have become more resilient and more focused. Behind us is a financial year that was characterised by very volatile market conditions. This exceptional market environment has enabled us to generate an equally exceptional result. It affords us the financial stability to continue making the necessary investments in the transformation of the energy system in a consistent and well-considered manner, as envisaged in our “VNG 2030+” strategy.

At 447 million euros, adjusted EBIT is significantly higher than expected. At 380 million euros, the Group result is also significantly higher than the previous year's figure.

The exceptional result for the 2023 financial year was only possible because of the outstanding work of all of our business areas. Our entire portfolio of gas supply contracts, storage and transport capacities performed excellently and proactively in a difficult market environment, thus contributing to the Group's success.

The market settled towards the end of the reporting year. Wholesale prices for natural gas fell significantly over the course of the year. The reason for this was the gradual equalisation of supply and demand. On the one hand, reduced industrial production and ongoing cost-cutting measures by households led to a decline in demand in Germany. On the other, the supply side was expanded through alternative sourcing and import channels in Germany. We expect the market situation to normalise further in 2024, meaning that we do not anticipate a repeat of this exceptional profit situation in the current year.

The exceptionally good result from 2023 bolsters our financial position and is a sound foundation from which to face the challenges ahead. It will enable us to make significant investments in the transformation to a climate-neutral society and economy in the coming years. Above all, the coming years will be defined for VNG by the expansion of the hydrogen infrastructure and our biogas business.



L-R: Bodo Rodestock,
Ulf Heitmüller, Hans-Joachim Polk

Natural gas continues to be an important energy source in Germany as a bridging technology on the way to a decarbonised energy supply. At 24.5 percent, natural gas continues to account for the second-largest share of German primary energy consumption. As VNG, we see it as our responsibility and consider it an important social task to ensure the supply of natural gas so that industry can maintain its competitiveness and, of course, no home goes cold.

To ensure security of supply, we are further diversifying our gas purchases. Last year, we signed a supply contract with the Algerian energy company Sonatrach. In January 2024, VNG became the first German company to purchase pipeline gas from Algeria.

In the reporting year, our subsidiary VNG Gasspeicher (VGS) also became the sole shareholder of Erdgas-speicher Peissen GmbH (EPG). EPG is responsible for the operation and further expansion of the “Katharina” underground storage facility near Bernburg in Saxony-Anhalt, one of the most modern natural gas storage facilities in Europe.

Since the energy crisis of the year before last, we have known that the security of supply cannot be taken for granted and we must go to great lengths to protect it. VNG stands for a secure supply of gas – now predominantly with natural gas, in future with renewable and decarbonised gases.

We benefit from more than 65 years of experience along the added value chain for gas. During this time, we have again and again boldly repositioned ourselves successfully in various social and economic systems with a willingness to change. Together with partners, we have made a significant contribution to building a gas pipeline network for Eastern Germany and securing the energy supply by converting it from town gas to natural gas. We are now transferring the skills we have gathered in these often turbulent times to current challenges and applying them to our future projects.



**FOR OVER
65 YEARS NOW,
VNG HAS
STOOD FOR THE
SECURITY OF
SUPPLY OF GAS**

“In future, VNG will be active in renewable and decarbonised gases along the entire value chain.”

– Ulf Heitmüller

Our flagship project is the Bad Lauchstädt Energy Park, which our Group is implementing with other consortium partners. In future, the real-world laboratory of the energy transition will replicate the entire value chain of green hydrogen – from wind farms and electrolysis to storage, transport and marketing. The ground-breaking ceremony took place in June 2023, marking the official start of construction work. Since then, work has been progressing according to schedule. The first hydrogen pipeline between the Bad Lauchstädt Energy Park and the Leuna Chemical Park is now being prepared for hydrogen transport by ONTRAS. The first supply contract for green hydrogen was concluded with TotalEnergies Raffinerie Mitteldeutschland in December.

The first hydrogen storage facility under the VNG Group umbrella is also planned for Bad Lauchstädt. This storage facility is being developed as a sub-project of Green Octopus Central Germany under the GO! brand. In the future, it will ensure the supply of hydrogen to several industrial regions in Central Germany.

Preparations for this are under way. In February 2024, VGS conducted a non-binding open-season procedure for the future H₂ storage facility in Bad Lauchstädt in order to be able to plan in line with demand and enter into dialogue with potential contractual partners.

In addition, biogas and biomethane will play an even more important role in the future energy system. They make it possible to sustainably increase the proportion of green gases now transported in the natural gas network. That is why our focus will remain on our biogas business and this forms an integral part of our growth strategy. Our subsidiary BALANCE currently operates 40 biogas facilities in Northern and Eastern Germany, making it one of the leading operators in the field of biogas and biomethane production.

How quickly and how well we succeed in the transformation from today's natural gas to green gases also depends crucially on the social, economic and, in particular, political conditions. Some legislative proposals and political measures or initiatives that have a significant impact on our business are still pending or are still under discussion and awaiting resolution. These include the urgently required framework conditions for financing of the H₂ core network, the EU's Delegated Act on a methodology for renewable fuels of non-biological origin, a hydrogen storage and import strategy and the Hydrogen Acceleration Act. We and the many other players on the market, including producers, importers, traders and customers, need planning and investment security before we can develop viable business models and be in a position to consistently drive forward the conversion of the gas-based part of the energy supply system.

For us, one thing is certain: with our daily commitment to a secure, economical and increasingly climate-neutral energy supply, we want to make our contribution to improving the performance of the economy and the quality of life of people, especially in the Eastern Germany region. This attitude is encapsulated in our corporate purpose “We provide energy when and where it is needed” and also informs the new mission statement for the VNG Group, which we developed in 2023. It serves as a compass for all employees at VNG to guide us in our day-to-day work.

The future starts now. We are using our experience to create something new, turning our ideas into investments. VNG will also be active in renewable and decarbonised gases along the entire value chain. We are pushing forward with these plans in many projects together with partners, thereby gaining access to new networks, technologies and business models.

One of the prerequisites for the success of our business and the transformation ahead of us is a stable socio-political framework in which democratic values such as freedom, diversity, inclusion and openness are respected and practised. They act as stable anchors in a dynamic environment giving us access to motivated employees and new ideas.

THE BAD LAUCHSTÄDT ENERGY PARK REMAINS A FLAGSHIP PROJECT FOR US



With the VNG Foundation, we therefore support civil society as well as civic, cultural and social initiatives in Eastern Germany. The “Verbundnetz für Wärme” [Network for Warmth] charitable initiative and our cooperation with universities deserve special mention here. We are proud and grateful that our Foundation will be celebrating its 15th anniversary in 2024 and has already achieved a great deal for the common good in the region in these one and a half decades.

In the current year, we expect a very solid result, which will be below that of 2023 but well above the pre-crisis level. On the bottom line, we are projecting an adjusted EBIT of between 230 and 270 million euros and a consolidated net profit in the 175 to 200 million euros range.

in 2024, it will be important to secure financing for major projects and continue our transformation towards a decarbonised business. With our solid capital base, we have seen our investment power strengthened. Our focus in the coming years will continue to be on investments in Eastern Germany, where we want to expand the infrastructure and accelerate projects with green and decarbonised gases. A total annual investment volume of 200 to 300 million euros is planned. We intend to invest a total of up to five billion euros (gross) in our future areas by 2035.

With the symbolic ground-breaking ceremony by all consortium partners, the Bad Lauchstädt Energy Park is moving from the theoretical planning phase to the construction realisation phase.

2023 was an extremely important and ultimately very successful year for the entire VNG Group. We would like to sincerely thank our shareholders, customers, partners and the Supervisory Board for their continued trusting cooperation. Our employees deserve special recognition. In an environment characterised by change and uncertainty, they have once again shown exceptional commitment, a high level of expertise and their tireless dedication to the company.

The Executive Board

Ulf Heitmüller

Chairman of the Executive Board

Hans-Joachim Polk

Member of the Executive Board, Infrastructure & Technical Affairs

Bodo Rodestock

Member of the Executive Board, Finance / Human Resources

Report by the Supervisory Board

“The Supervisory Board is firmly convinced that the VNG Group will play a vital role in transforming the energy industry.”

– Dirk Güsewell

AFTER A HIGHLY CHALLENGING FINANCIAL YEAR IN 2022, VNG ACHIEVED A REAL TURNAROUND IN 2023.

Based on this solid foundation, favourable market conditions and the remarkable commitment of the workforce, VNG was able to deliver an impressive operating performance over the course of the 2023 financial year.

The work of the Supervisory Board focused intensively on the further development of the “VNG 2030+” strategy update, further portfolio diversification and the establishment of a hydrogen strategy. The meetings focused on various projects in the areas of generation, transport, biogas and hydrogen. For example, the decision to invest in the Bad Lauchstädt Energy Park real-world laboratory, in which the entire value chain with green hydrogen is modelled under real conditions, represented a significant milestone and is a flagship project for VNG. The Supervisory Board is firmly convinced that

the VNG Group will play a vital role in transforming the energy industry. The Supervisory Board therefore supports the projects in a constructive dialogue in order to jointly shape the path to success.

Dirk Güsewell, Chairman of the Supervisory Board of VNG AG

MAIN ACTIVITIES OF THE SUPERVISORY BOARD IN THE PAST FINANCIAL YEAR

The Supervisory Board held a total of four regular and three extraordinary meetings in the 2023 financial year. In connection with its advisory and monitoring responsibilities, the Supervisory Board reviewed the activities of all business areas of the Group. The main areas of focus included:

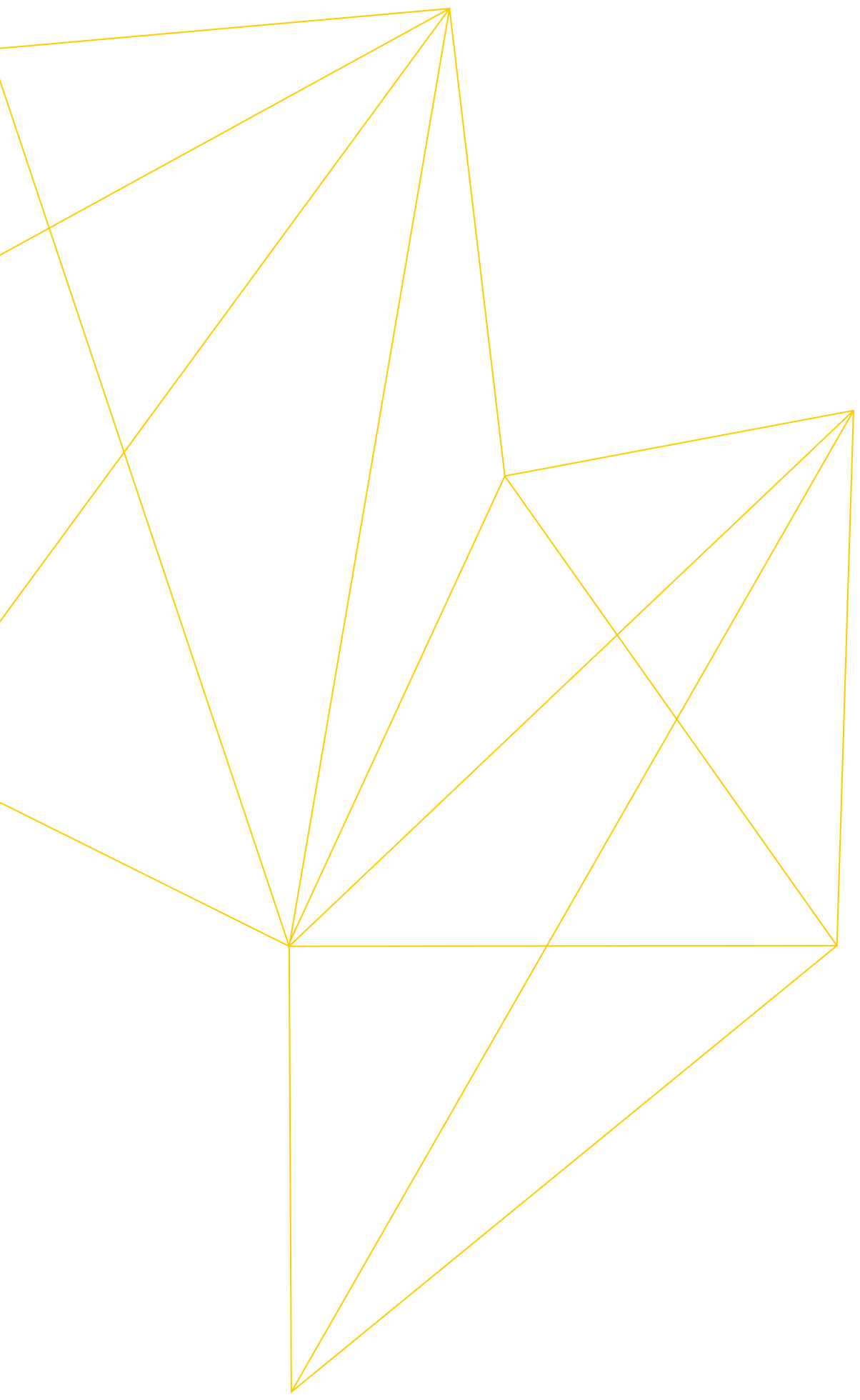
- ▶ the annual and consolidated financial statements 2022,
- ▶ medium-term planning for 2024–2026,
- ▶ the “VNG 2030+” strategy update,
- ▶ resolutions of the Supervisory Board:
 - ▶ on the Bad Lauchstädt Energy Park real-world laboratory
 - ▶ on the conclusion of a rental agreement for VNG office space in Leipzig,
 - ▶ on the takeover of the Katharina underground storage facility by VNG Gasspeicher GmbH,
 - ▶ on the conclusion of a gas purchase agreement within the scope of the LNG supply obligation by VNG Handel & Vertrieb GmbH,
- ▶ on the general approval of purchase and sales contracts of VNG Handel & Vertrieb GmbH,
- ▶ on the acquisition of bmp greengas GmbH by VNG Handel & Vertrieb GmbH and
- ▶ on investments in preparatory measures in the hydrogen core network of ONTRAS Gas-transport GmbH,
- ▶ the consideration of detailed, ongoing and miscellaneous reports,
 - ▶ on the current situation of the company, in particular on the earnings, financial and liquidity status and risk management of the VNG Group,
 - ▶ on HSSE-related topics and measures,
 - ▶ on key topics from the operating areas, including the current status of LNG procurement in the Trading area,
 - ▶ on the development of political framework conditions, sanctions and market developments,
 - ▶ on relevant compliance topics and the current state of IT security,
 - ▶ on the tax office procedures at HANDEN Sp. z o.o.

- ▶ on planned sales of equity investments in companies and
- ▶ on topics relating to the establishment and expansion of a hydrogen infrastructure.

Based on these deliberations and on the reports submitted and the information provided by the Executive Board, the Supervisory Board is satisfied that the management of the Group is being conducted in a regular and orderly manner.

AUDIT RESULTS OF THE AUDITORS

Ernst & Young GmbH has audited the annual financial statements of VNG AG as of 31 December 2023 as issued by the Executive Board as well as the management report for the 2023 financial year, including the book-keeping and compliance with the accounting obligations in accordance with § 6b (3) EnWG (German Energy Industry Act), and endorses these with an unqualified audit certificate. In addition, the consolidated financial statements prepared in accordance with IFRS as of 31 December 2023 and the Group management report were also reviewed. The auditor issued an unqualified audit certificate for these, too. The audit reports were presented to all members of the Supervisory Board. The Supervisory Board duly noted and approved the result of these audits.



The Supervisory Board reviewed the annual financial statements of VNG AG and the management report as well as the consolidated financial statements and the Group management report. After the final result of the Board’s review thereof, no objections were raised. The auditor attended the balance sheet meeting of the Supervisory Board and reported to the Supervisory Board on the main results of his audit. The Supervisory Board approved the annual financial statements as of 31 December 2023 as issued by the Executive Board. The annual financial statements were thus formally adopted. In addition, the Supervisory Board endorsed the consolidated financial statements of VNG AG as of 31 December 2023 and the Group management report.

The report on relationships with affiliates of VNG AG to be drawn up by the Executive Board in accordance with § 312 AktG (German Companies Act) was presented. The auditor reviewed this report and issued the following unqualified audit certificate in accordance with § 313 (3) AktG:

“According to our due examination and assessment, we confirm that

- ▶ the factual information in the report is correct,
- ▶ the payments by the company for the legal transactions listed in the report were not unreasonably high and

- ▶ there are no circumstances in favour of a significantly different assessment of the measures listed in the report than that stated by the Executive Board.”

Based on its review, the Supervisory Board endorses the auditor’s assessment.

COMPOSITION OF THE SUPERVISORY BOARD

There were no personnel changes on the Supervisory Board of VNG and its committees in the 2023 financial year.

Supervisory Board:

Dirk Güsewell (Chairman of the Supervisory Board), Dr. Frank Brinkmann (1st Deputy Chairman of the Supervisory Board), Christina Ledong (2nd Deputy Chairman of the Supervisory Board), Markus Baumgärtner, Tobias Dittrich, Sascha Enderle, Barbara Endriss, Christina Fenin, Prof. Martin Fleckenstein, Hans-Peter Floren, Monty Heßler, Peter Heydecker, Prof. Antonio Hurtado, Hartmut Kremling, Karsten Rogall, Gunda Röstel, Katja Schmied, Dr. Benno Seebach, Liv Monica Stubholt, Sebastian Thamm and Dr. Bernd-Michael Zinow

Finance and Investment Committee:

Sascha Enderle (Committee Chairman), Markus Baumgärtner, Peter Heydecker, Karsten Rogall and Sebastian Thamm

Personnel Committee:

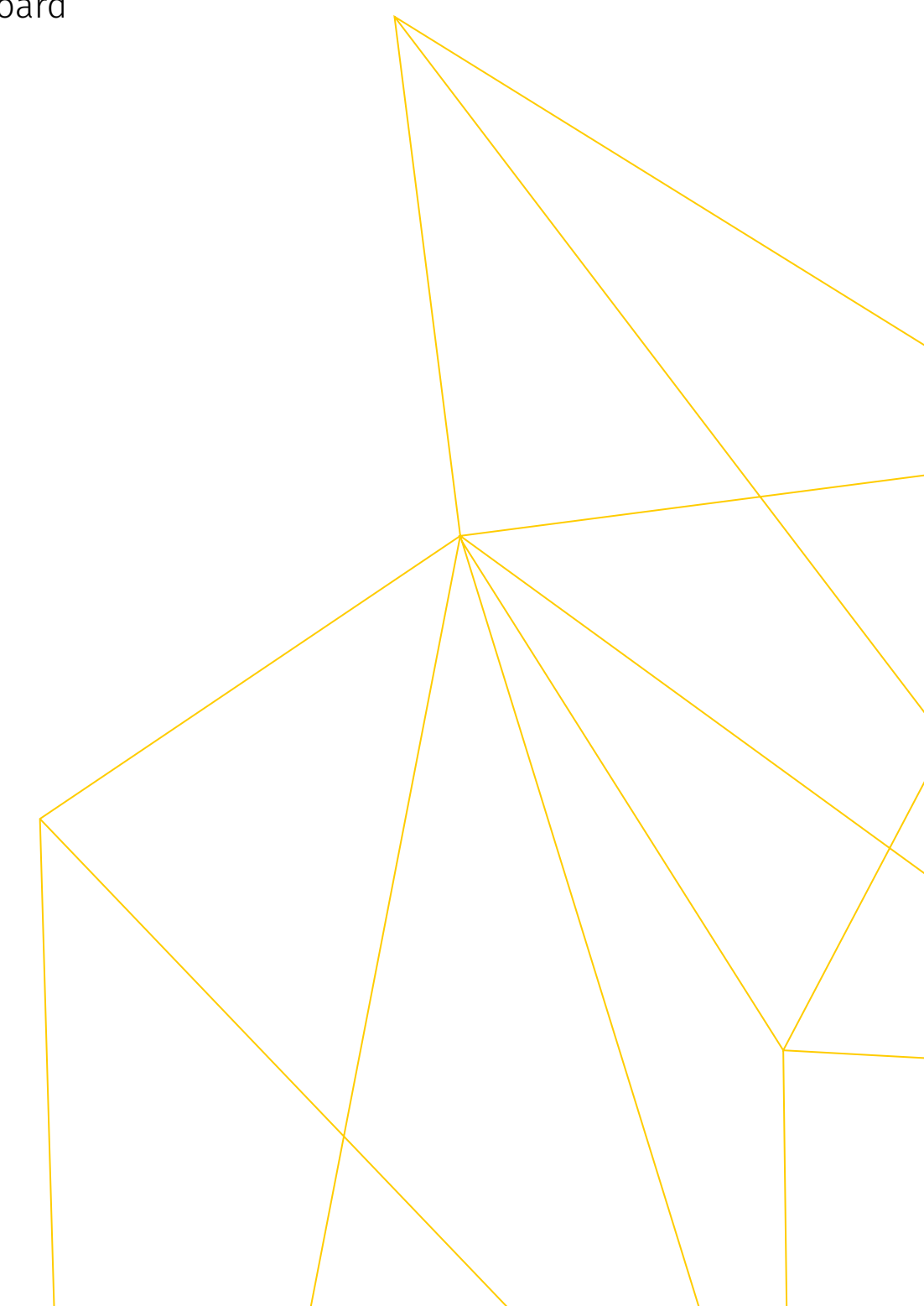
Dirk Güsewell (Committee Chairman), Dr. Frank Brinkmann, Markus Baumgärtner, Christina Ledong and Dr. Bernd-Michael Zinow

On behalf of all members of the Supervisory Board, I would like to thank the Executive Board and all employees of VNG and all Group companies for their energetic commitment, the work they have done and their achievements in this remarkable year.

Leipzig, 11 April 2024

The Supervisory Board

Dirk Güsewell
Chairman



SECURING ENERGY SUPPLIES

We see ourselves as a key player in securing supplies of gas in Eastern Germany. Accordingly, we ensure that our customers always receive the energy they need, both now and in the future. We guarantee this with diversified energy sources, a reliable gas infrastructure and international cooperation.

Diversified procurement

Biogas and biomethane

Pipeline network

Underground storage facilities



Ulf Heitmüller

Chairman of the Executive Board

Ulf Heitmüller has been Chairman of the Executive Board of VNG AG since 2016. Under his leadership, the Group-wide transformation of the company has been and continues to be driven forward.

Change is in our DNA

VNG has proven time and again how well it masters change processes and upheavals. The constant factor: even in turbulent times, security of supply was always assured. In this interview, CEO Ulf Heitmüller explains how VNG is applying the experience and skills it has acquired over decades for its role in the energy system of the future.

► **How important is security of supply in the transition to the green gas business?**

Procuring, transporting and storing gas-based energy sources is an absolute priority for us today and in the future. We are well prepared for this. After all, guaranteeing security of supply has been part of our DNA for more than 65 years. Even in turbulent times and in different social and economic systems, we have always fulfilled this requirement.

► **Which milestones make this particularly clear?**

Since our Group was founded in 1958, our task has been to supply households and companies in Eastern Germany with gas, initially with town gas produced from coal. We later switched to natural gas. At the beginning of the 1990s, we expanded our pipeline network westwards together with Ruhrgas, thereby gaining access to the European gas markets. As a result, we were later able to source natural gas from countries such as Norway and increase our trading activities on the international market.

► **How important was the transformation at the beginning of the 1990s for VNG?**

Looking back, we completed our first energy transition with the switch from town gas to natural gas. The transformation continued in the mid-2000's, when we had to reposition our company as a result of liberalisation and regulation. We have also entered the renewable energy business in the form of biogas. That was our first step into the decarbonised business. In future, our focus will increasingly be on green and decarbonised hydrogen. The history of our Group has always been marked by change and transformation. And this is what has made us grow.

“In future, our focus will increasingly be on green and decarbonised hydrogen.”

– Ulf Heitmüller

► **VNG has refocused its strategy for 2023. How will VNG position itself in the future?**

In light of the experience gained in 2022, we want to step up a gear in order to complete the transformation of our company towards a decarbonised business. We want to invest around five billion euros in this area by 2035. The majority of this is to be channelled into the hydrogen ramp-up, i.e. into H₂ pipelines and H₂ generation infrastructure as well as the conversion of storage facilities. With our strategy update, we are focusing even more strongly, increasing the pace of the transformation to green gases and charting even more clearly the direction we want to take as a Group.

► **Does this mean that VNG is placing all its bets on green?**

In any case, we are accelerating our transformation and driving forward the hydrogen and biogas roll-out in Eastern Germany. We do this with our customers and with all our infrastructure assets. However, we also see the conventional natural gas business as a central pillar of our business and have reviewed it in the strategy update. Our mission is to supply energy and this includes ensuring a reliable gas supply with a broad procurement mix, secure infrastructure and consistent risk management. All these form part of our strategy.

► **What conditions must be met for VNG to achieve the targets set out in the strategy?**

We need a stable and reliable political framework so we can invest as planned and hence drive forward the transformation while assuring security of supply. In an international context, cross-border cooperation in the procurement and trading of gas and, in the long term, of hydrogen is important. Our business is also highly influenced by the political climate in Germany. Firstly, because the optimal design and utilisation of future energy sources depend on the regulatory framework. Secondly, because the basis of our success is an open and diverse society in which democratic values are practised. Such a society promotes innovation and creativity, which generate solutions in a dynamic environment. It also improves our access to talent and new ideas. This is exactly what we need to continue to supply markets, companies and ultimately every single person in the region with energy, now and in the future.

**FIVE BILLION EUROS
BY 2035 FOR
DECARBONISED BUSINESS
AND TO SECURE GAS
INFRASTRUCTURE**

Security of energy supplies – today and tomorrow

A modern society needs energy to ensure growth and prosperity. Both depend on a stable supply of electricity and heat. VNG plays a central role in meeting the demand for gas-based energy sources, particularly in Eastern Germany.

For many years now, people in Germany have taken it for granted that energy would always be available in the required quantity. This certainty was seriously shaken for the first time in 2022, when Russian supplies had to be replaced by other sources. The general public suddenly perceived the system that was working behind the scenes to supply a modern economy with energy.

The role of natural gas in particular became the centre of attention. Because although we are pushing ahead with the expansion of renewable energies, we know that we will rely on natural gas for some years to come. After mineral oil, it is still the most important source of energy in Germany and a mainstay of the energy mix. Every second home still heats with natural gas. The 1.8 million commercial and industrial companies in Germany are an important consumer group. They use natural gas to generate heat and electricity for their

processes or utilise it directly as a raw material for their products. In other words, the availability of natural gas is still of vital interest to our society today. In Eastern Germany, VNG has stood for a secure supply for more than 65 years – and continues to do so.

Security of supply is the central task for all business areas at VNG 24 hours a day, 365 days a year. Our trading and sales companies ensure the reliable supply of gas to regional utility companies, industry and commercial and household customers in Germany and abroad. In Germany alone, we supply 400 municipal utilities, commercial and industrial companies with the required and contractually agreed gas volumes at all times. To achieve this, we draw on a broad procurement portfolio.

Since our pipeline imports from Russia are no longer available due to the Russian suspension of supplies, we are diversifying our sources of supply even more in the interests of security of supply. The largest share of our natural gas imports today comes from Norway. We also procure volumes of gas from Algeria, via the commodity market and with purchases of LNG.

In February 2024, we were the first German company to sign a pipeline-based supply contract with the Algerian energy company Sonatrach. We are aiming to enter into further supply partnerships in future in order to increase security of supply in Germany.

However, it is not just the availability of energy that we care about, but also loyalty to our customers. Just one example, during the 2022 energy crisis, we succeeded in procuring the contractually agreed delivery volumes at all times – despite significantly higher procurement prices and high business risks. This was the only way we could avoid domino effects that would have led to much greater damage for municipal utilities and companies in the region.

Our trading and sales companies are an important partner in the European natural gas business. They participate in cross-border energy trading and help to keep the energy markets liquid. This also stabilises the gas supply for our neighbouring countries.

A modern grid is essential for the security of energy supply.

7,700 kilometres

is the network of the transmission system operator ONTRAS.

GAS TRANSPORT IS A JOINT ENDEAVOUR

Our Transport division is an additional guarantee for security of supply. At the centre is the independent transmission system operator ONTRAS. With a 7,700 kilometre network, it makes an important contribution to the smooth operation of the European gas market. Close cooperation between the network operators is a central element in assuring security of supply, and not just in exceptional situations.

The 2022 energy crisis showed just how flexible the gas transport sector can be. The entry into the market of new suppliers changed the direction of flow in the long-distance pipelines. Previously, natural gas was mainly transported from Russia to other neighbouring European countries via the German hub. The flow direction was reversed when the Russian gas flows were cut off. LNG, in particular, is now also arriving in the north of Germany, from which it has to be transported to all other regions of Germany. ONTRAS supports the integration of additional quantities of liquefied natural gas supplied via LNG terminals into the grid. These measures also improve the security of supply in Germany.

In addition to the gas pipelines, the gas storage facilities and the gas reserves in special subterranean caverns are also a pillar of Germany's security of supply. They make energy available when it is needed. Our subsidiary VNG Gasspeicher operates four of these storage facilities in Northern and Central Germany. They have a

combined storage capacity of 2.4 billion cubic metres. VGS customers store natural gas to cover fluctuating demand, especially in winter. However, they also use storage to compensate for volatile procurement costs. In this way, gas storage facilities help stabilise the markets and make supply more secure.

A fourth pillar for security of supply is regionally produced biogas and biomethane. VNG has been active in this business area since 2006. We have significantly expanded our biogas activities since 2017. In Northern and Eastern Germany, the VNG subsidiary BALANCE now operates 40 plants that produce biogas and biomethane from renewable raw materials and biomass. Biogas offers a particular advantage compared to other renewable energy sources: in contrast to solar and wind energy, it is always available. It is base-load capable and can

be utilised at any time for the reliable generation of electricity and heat. Biogas is primarily converted into renewable electricity on site using combined heat and power plants. However, it can also be processed and fed into the natural gas grid. From there, it is primarily used in the heating and transport sectors.


GROUP'S NEW MISSION STATEMENT

At the end of 2023, VNG adopted a new mission statement that spans all companies of the Group. In line with our corporate purpose "We provide the energy that is needed.", we define ourselves in our mission statement as a leading energy company with a key role in assuring reliability of supply now and in the future, with a regional identity in our DNA and as a strong regional partner. Two components of the mission statement embody our guiding principles and our core values. These inform all our daily activities and, at the same time, form a binding framework for our business policy decisions.

More information at: www.vng.de/en/mission-statement



**"WE PROVIDE
THE ENERGY THAT
IS NEEDED."**



THE FIRST HYDROGEN PIPELINES ARE LAID BETWEEN THE BAD LAUCHSTÄDT ENERGY PARK AND THE LEUNA CHEMICAL PARK

A DECARBONISED WORLD ALSO NEEDS SECURITY OF SUPPLY

Natural gas is needed for the competitiveness of our industry and the prosperity of our society. Due to its elementary importance, a secure gas supply is invaluable.

In the future, hydrogen and biogas will replace today's natural gas and, together with renewable electricity, provide a climate-neutral supply. The same safety and reliability requirements must apply to the new energy molecules.

We are already committed to this today. We are sustainably developing our assets – from generation to our system-relevant gas infrastructure. In all of VNG's business areas, transformation is also informed by the necessity of maintaining security of supply.

In the trading sector, we are growing the import, production and sale of renewable and decarbonised gases. We are actively supporting our customers in their transition to biogas and hydrogen and work with them to develop solutions for decarbonisation.

In the transport sector, ONTRAS is working on the development of the H₂ core network in Eastern Germany and on other pipeline-based H₂ pilot projects. Where natural gas flows today, hydrogen will flow tomorrow. To achieve this, many natural gas pipelines can be gradually converted to hydrogen, which is significantly cheaper than a complete newbuild.

However, it must also be possible to store hydrogen as reliably as natural gas. We will be researching the requirements for operations and the new system technology at our storage facility in Bad Lauchstädt. A connected cavern storage facility is to be integrated into the on-site hydrogen infrastructure in the future.

On the way to the new energy world, we will continue to ensure a reliable supply for our customers. In the following sections, you can read about what the Group is specifically doing to drive forward the transformation of the energy sector (from page 18) and the structural change in the region (from page 29).

HELPING SHAPE THE ENERGY TRANSFORMATION

We are helping shape the energy transition and driving the transformation from fossil gas to a renewable and decarbonised supply of biogas and hydrogen (H₂). Our projects extend all the way up and down the gas value chain. In realising these projects, we leverage experience gained over decades and work together with expert partners.

Bad Lauchstädt Energy Park

Green gases

Biogas projects

“VNG 2030+”

Tiny molecules for the big transformation

We are on the way to a climate-neutral society. To achieve this goal, we need to fundamentally change our energy supply. This is not possible with electricity alone. This is because energy in the form of molecules currently covers the majority of demand on the energy and heating market. VNG is driving forward the gas-based transformation in all business areas.

The energy industry is changing from the ground up and at a rapid pace. With new solutions and technologies, we also want to make our contribution to making the energy system renewable and CO₂-neutral. This transformation is affecting all areas of our company.

The energy transition is often only viewed in connection with renewable electricity supply. The vast majority of the energy we consume is not provided by electricity, but by solid, liquid or gaseous molecules. Hydrocarbons will continue to be needed in many fields of application in industry and the heating sector in the future, as they are difficult to electrify or only partially electrifiable.

While the majority of the hydrocarbons currently is usually obtained from fossil fuels, these are set to be increasingly replaced by renewable and decarbonised gases such as biogas and hydrogen in the future. They are the hydrocarbon-based energy sources of the future.

As an integrated gas group, VNG has a special role to play in this project. We want to help shape the gas-based transformation of our energy system and provide the energy that contributes to the performance of the economy and the quality of life of our society.

We are therefore pressing ahead with the expansion of our biogas generation and with the ramp-up of hydrogen, that is to say with the transformation to green gases. This has implications for trading and sales, gas transport and storage. The following pages provide an overview of our projects for the molecular world of tomorrow.

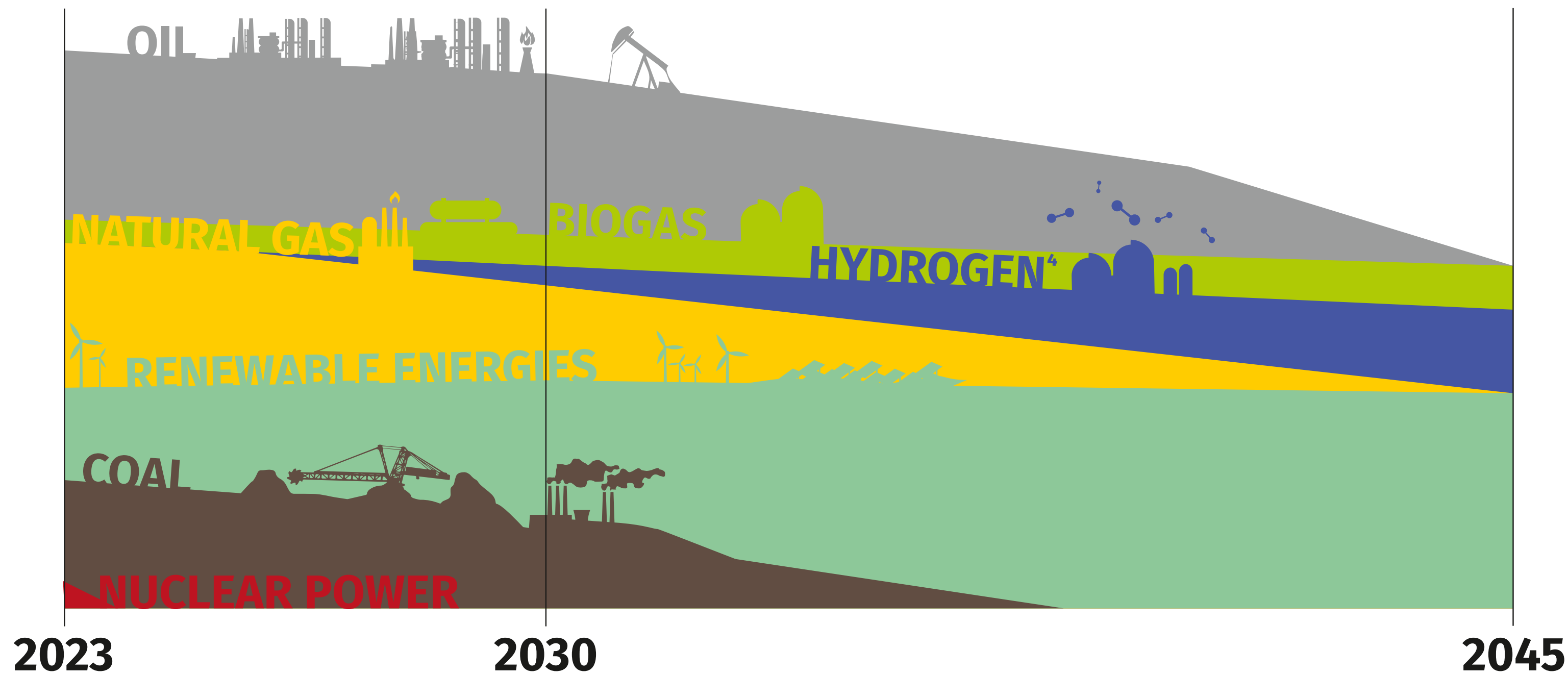
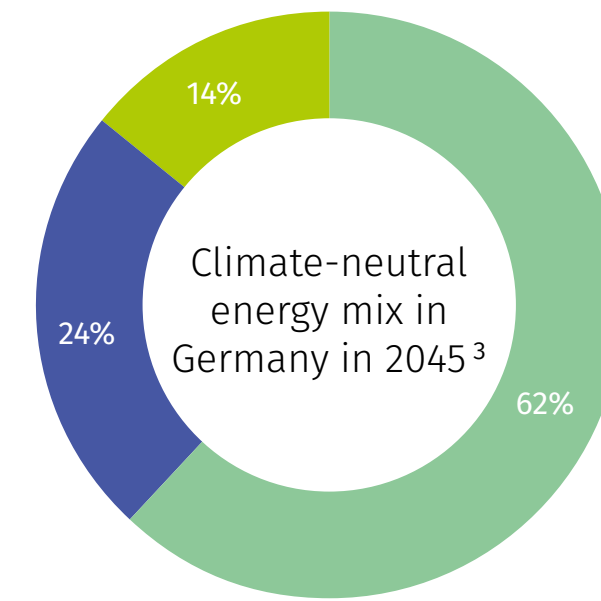
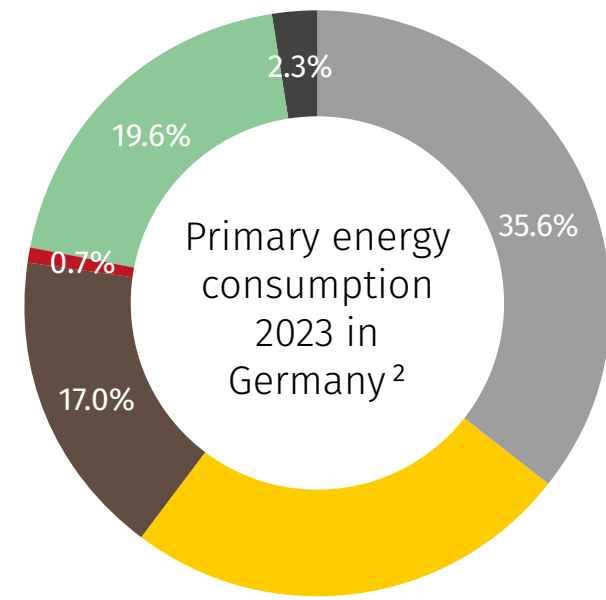
Only **20.2** percent is the share of electricity in the energy supply in Germany.

Energy supply of final energy consumption 2022 in TWh



Sources: Own estimates based on Federal Environment Agency (2023), AG Energiebilanzen (11/2023) and Federal Statistical Office (2023)

The future lies with green gases ¹



“VNG 2030+” STRATEGY

Together with our partners and customers, we aim to offer the right services and products for gas and energy, notwithstanding the increasing complexity of the energy market. We regularly refine our strategy, which was updated again in 2023.

By increasing the investment sum to five billion euros (gross) by 2035, we are accelerating the implementation of our roadmap for the transformation to renewable gases and driving forward the hydrogen and biogas ramp-up in Northern and Eastern Germany. We aim to play a key role in the value chain for climate-neutral gases – especially in the infrastructure sector. The goal remains a reliable gas supply in the long term, with which we can successfully contribute to an increasingly decarbonised economy and society.

¹ This simplified diagram shows the forecast changes in energy supply by energy source in Germany.
² Primary energy consumption 2023 (renewable energies including biogas); Source: AGEB Energiebilanzen e. V.; Status: December 2023.
³ Climate-neutral energy mix from 2045; Source: own projections and estimates
⁴ This relates to green and decarbonised hydrogen.

Future projects of VNG

At many different locations and in a variety of projects, VNG is working on the future with green gases. In addition to the 40 biogas facilities currently in operation, the focus is on the import, generation, trade, transport and storage of hydrogen.

OVERVIEW OF CURRENT PROJECTS IN PREPARATION, DEVELOPMENT AND IMPLEMENTATION ¹

H₂ IMPORT

H₂ TEM
Import of green ammonia

H₂ PRODUCTION

H₂ H2GE
Production of blue low-carbon hydrogen

H₂ GreenRoot
Production of green hydrogen by electrolysis on an industrial scale

H₂ Bad Lauchstädt Energy Park
Real-world laboratory for the energy transition, which replicates the entire hydrogen value chain for green H₂
energiepark-bad-lauchstaedt.de

H₂ AZAN
Construction of an ammonia cracker for the production of green hydrogen

H₂ greenHyBB
Creating a value chain for green hydrogen
[Find out more](#)

BIOGAS PROJECTS

Biogas facilities of BALANCE
Erneuerbare Energien GmbH

H₂ TRANSPORT

A doing hydrogen
Around 600 kilometres of pipelines from Rostock via the Greater Berlin area to the Eisenhüttenstadt steel region and the Leipzig / Halle economic region
doinghydrogen.com

B Green Octopus Central Germany
Around 300 km of hydrogen lines between the Salzgitter steel region via industries in the federal state of Saxony-Anhalt to the Central German "Chemical Triangle" region

C H₂ pipeline in Bad Lauchstädt
Hydrogen pipeline between the Bad Lauchstädt Energy Park and the Leuna Chemical Park

H₂ PRODUCTION

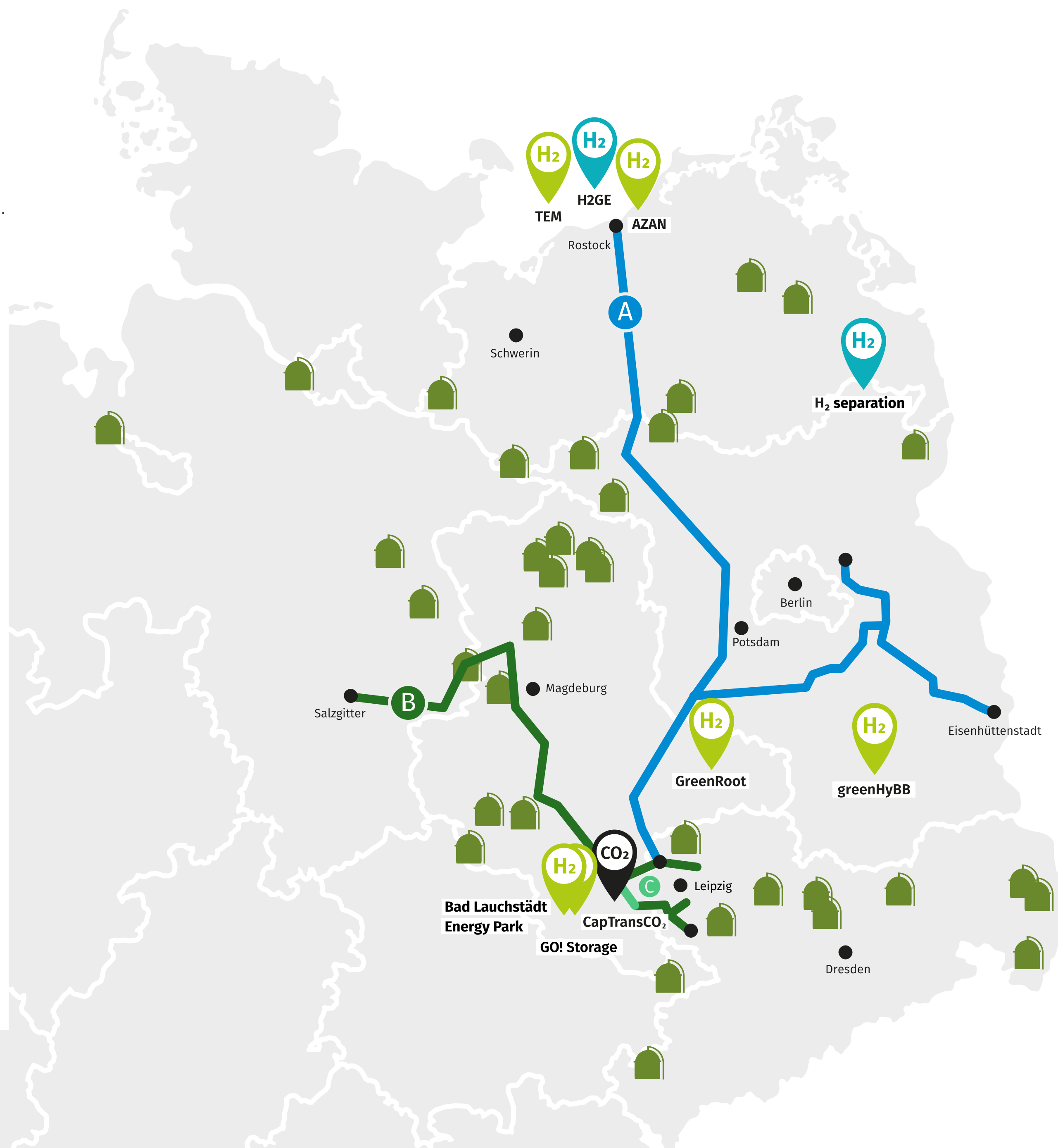
H₂ GO! Storage
Project for the large-scale storage of hydrogen in the Bad Lauchstädt gas storage facility

RESEARCH PROJECTS

CO₂ CapTransCO₂
Feasibility study for the storage and further use of CO₂

H₂ H₂ separation / membrane project Prenzlau
Efficient separation of hydrogen from a hydrogen-natural gas mixture

¹ Diagram





**FROM 2025,
HYDROGEN FROM THE
BAD LAUCHSTÄDT
ENERGY PARK WILL
INITIALLY BE SUPPLIED
TO POTENTIAL
CUSTOMERS IN THE
REGION**

Hydrogen flagship project for the energy transition

The Bad Lauchstädt Energy Park will replicate the entire green hydrogen value chain and could soon be supplying large industrial companies with energy. The real-world laboratory of the energy transition sponsored by the BMWK (German Industry Ministry) makes VNG's future strategy tangible today. The project will help us and the participating companies and partners to acquire expertise and paves the way for the success of further projects.

How the gas industry of the future will work can soon be observed at the Bad Lauchstädt Energy Park: eight wind turbines supply the renewable electricity to the electrolyser in which the hydrogen is produced. From there, the green gas is to be supplied to potential customers from 2025 via a transport pipeline converted for H₂. These are, for example, industrial companies from the Leuna region that require hydrogen as an energy source or raw material. VNG has already concluded its first supply contract with the energy company TotalEnergies Raffinerie Mitteldeutschland.

In a later phase, after completion of the real-world laboratory project, the green hydrogen could be stored in a converted salt cavern of the underground gas storage facility in Bad Lauchstädt. This ensures that generation and consumption can be decoupled from each other in terms of time – a prerequisite for the flexible supply of other customers. The plan is to produce around 27 million cubic metres of hydrogen per year in Bad Lauchstädt. By 2030 at the latest, the system should be self-supporting.

VNG is the consortium leader in the project and is supported by experienced partners: Terrawatt is building the wind farm that will go into operation in summer 2024. In a joint venture with Uniper, VNG H&V will construct and operate a large-scale electrolyser with a capacity of 30 megawatts. VGS is assuming responsibility for H₂ storage on site. ONTRAS will be taking care of H₂ transport to Leuna. DBI Gas- und Umwelttechnik GmbH is providing scientific support for the project. In close cooperation with all partners, the future will soon become the present in Bad Lauchstädt.

BAD LAUCHSTÄDT ENERGY PARK – THE FUTURE OF GREEN HYDROGEN

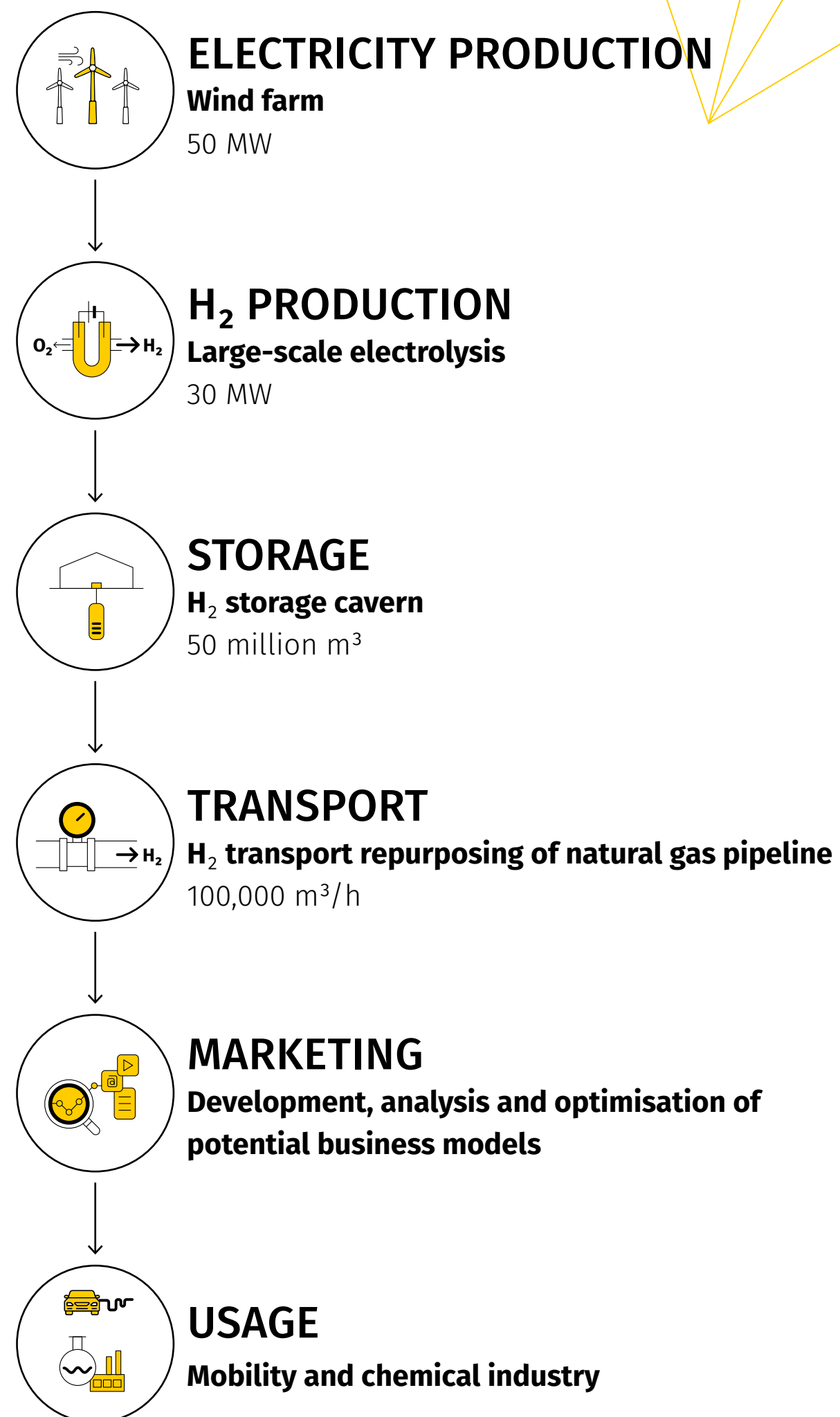
The experience and knowledge that we are gathering at the Bad Lauchstädt Energy Park along the entire value chain will help us for future transformation projects. It will bring fresh ideas and make us more effective and efficient.

One of the most important findings so far is that with many reliable partners pulling together, we are able to press ahead with the hydrogen ramp-up quickly and purposefully. The Bad Lauchstädt Energy Park is a first hydrogen flagship project that has been recognised and valued as such by national and international partners in the field of green gases.



Presentation of the official notification of funding for the Bad Lauchstädt Energy Park

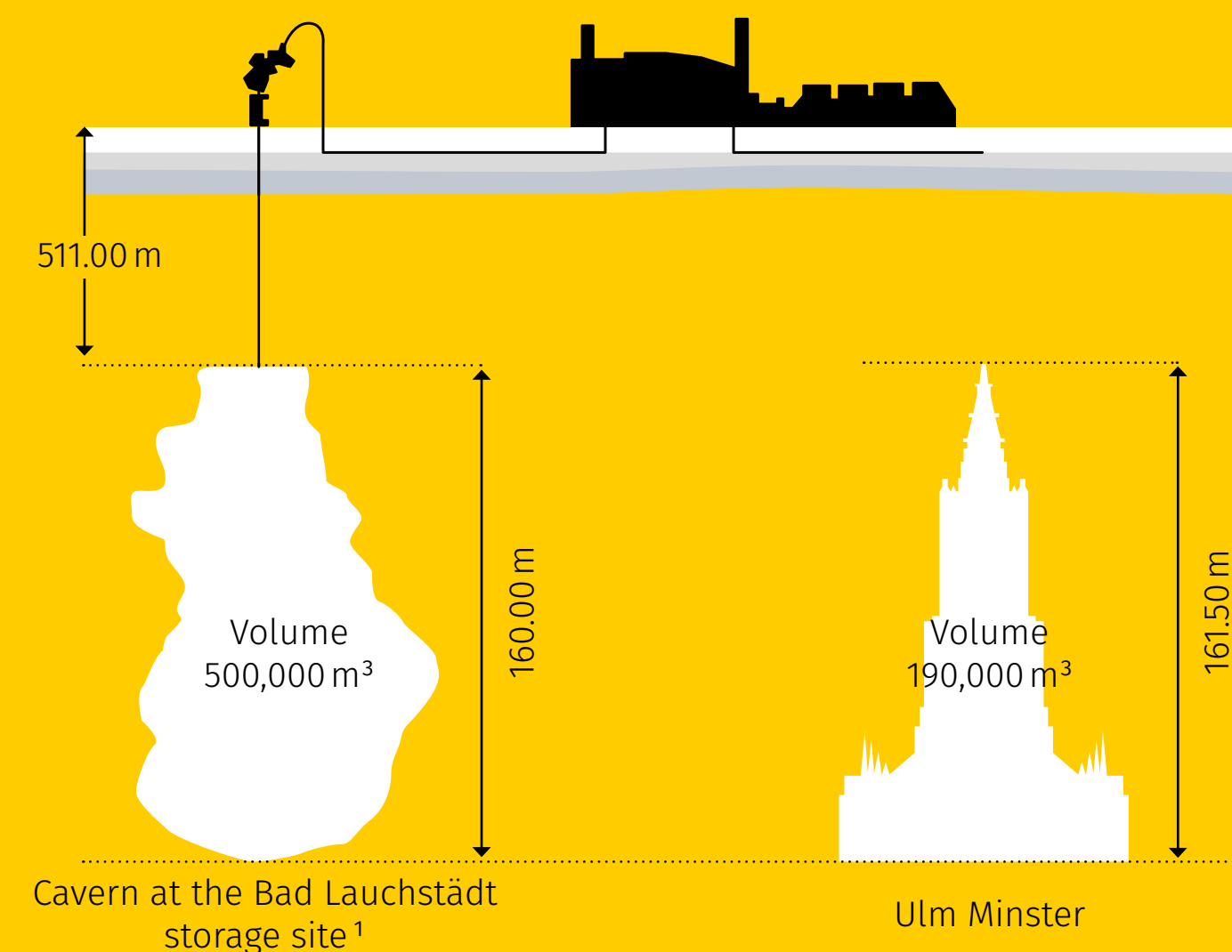
Mutually reinforcing activities at the Bad Lauchstädt Energy Park



HYDROGEN STORAGE IN BAD LAUCHSTÄDT

VNG Gasspeicher GmbH (VGS) is the owner of four underground storage facilities that currently store natural gas for customers. The largest VGS storage facility is located in Bad Lauchstädt. It consists of 17 individual caverns, one of which is to be prepared for the storage of hydrogen. The project is named GO! Storage is a sub-project of Green Octopus Central Germany and has been notified by the EU Commission as an Important Project of Common European Interest (IPCEI). The capacity of the underground cavern is 500,000 cubic metres. This is more than twice the size of Ulm Minster. The gas is highly compressed for storage. This allows the volume of the caverns to be optimally utilised. The pressures correspond to around 60 times the value of a car tyre. This enormous overpressure is generated by powerful gas or electric compressors.

Comparison of the dimensions of an H₂ cavern at the Bad Lauchstädt underground gas storage facility



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

Our projects for hydrogen production

HYDROGEN FOR SAXONY-ANHALT

Exploring what is possible with feasibility studies

Numerous industrial companies in Central Germany are facing the challenge of decarbonising the energy requirements for their production facilities. We are supporting and accompanying them, with for example, our **GreenRoot** project. We work together with the company HyCC from the Netherlands. The hydrogen company is a joint venture between the chemical company Nobian and the Australian investor Macquarie. Together, we want to build an industrial-scale electrolysis plant in Central Germany to supply the local chemical industry with green hydrogen. The first stage of the Greenroot project consists of a study that analyses the demand potential and technical feasibility of building electrolyzers on site.

AMMONIA CRACKER IN ROSTOCK HARBOUR


VNG is researching with partners how H₂ imports can be realised

In future, green hydrogen produced in sunny and windy regions will be transported to Germany by ship. Ammonia (NH₃) is an ideal carrier substance for this purpose. The compound of hydrogen and nitrogen can be broken down and converted back into its component molecules in what are called crackers. The port of Rostock could be a suitable location for an ammonia cracker, as there is already a convenient terminal there. The construction and operation of a corresponding plant is planned under the **AZAN** project. To this end, VNG has signed a letter of intent with its parent company EnBW Energie Baden-Württemberg (EnBW) and the Japanese energy company JERA. The aim is to first conduct a feasibility study. Depending on the outcome of the study and the potential expansion stages, 70,000 to 140,000 tonnes of hydrogen could be produced annually and fed into the future hydrogen network.

GREEN GAS FOR BRANDENBURG

Complete H₂ value chain for the federal state

As part of the **greenHyBB** (green Hydrogen for Brandenburg) project, VNG is working with EnBW and ONTRAS to establish a complete value chain for green hydrogen in Lausitz. The renewable electricity is to come from subsidy-free wind and solar parks built by EnBW. A 100 MW electrolyser is to produce green hydrogen from this renewable electricity and ultimately make it available to companies in Brandenburg. Surplus hydrogen can also be transported to other regions via the future European H₂ network. The necessary grid connections will be created by ONTRAS.

Further information
on the greenHyBB project
can be found **online** 



Our hydrogen projects for import, transport and storage

TRANSPORT PIPELINE – H₂ STARTER NETWORK: FOUNDATION STONE FOR AN EASTERN GERMAN HYDROGEN NETWORK

With the ONTRAS H₂ starter network, **ONTRAS** intends to lay the foundation for an Eastern German hydrogen pipeline network that connects hydrogen producers and consumers as well as import points and storage facilities in a system-optimised way. The two major projects selected as IPCEI (Important Projects of Common European Interest) – doing hydrogen and Green Octopus Mitteldeutschland – and the H₂ transport pipeline in the Bad Lauchstädt Energy Park form the core of the network, which covers over 900 kilometres.

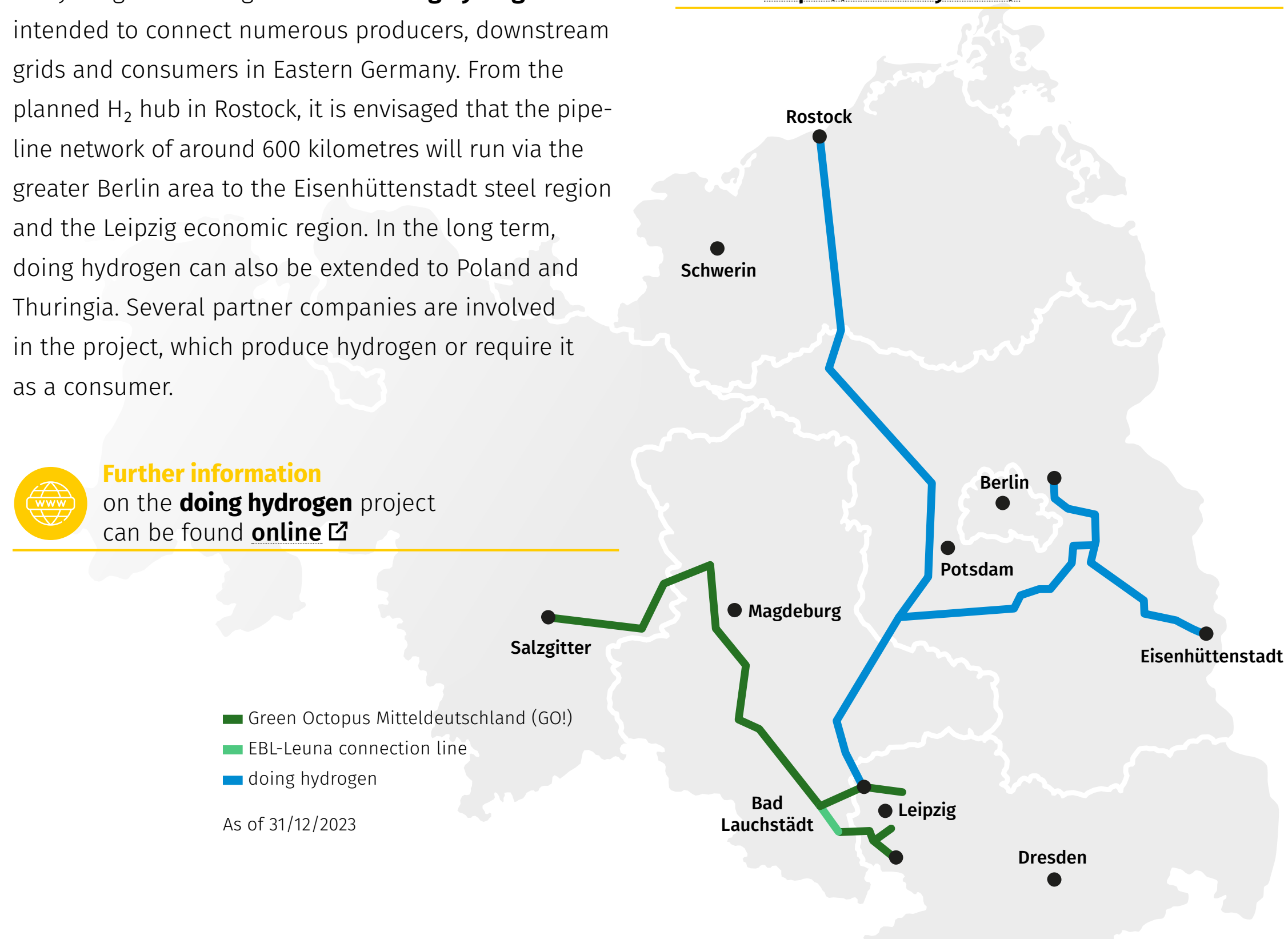
All three pipeline projects of the ONTRAS H₂ starter network are included in the draft application for the Germany-wide hydrogen core network. With the planned border crossing point, the ONTRAS H₂ starter network is also firmly integrated into the European hydrogen network (European Hydrogen Backbone).

LONG LINE FROM LEIPZIG TO ROSTOCK

Everything from a single source – **doing hydrogen** is intended to connect numerous producers, downstream grids and consumers in Eastern Germany. From the planned H₂ hub in Rostock, it is envisaged that the pipeline network of around 600 kilometres will run via the greater Berlin area to the Eisenhüttenstadt steel region and the Leipzig economic region. In the long term, doing hydrogen can also be extended to Poland and Thuringia. Several partner companies are involved in the project, which produce hydrogen or require it as a consumer.

Further information on the **doing hydrogen** project can be found **online** [↗](#)

Further information on the **Green Octopus Central Germany** project can be found here: <https://www.ontras.com/en/go> <https://www.lhyve.de/> [↗](#)

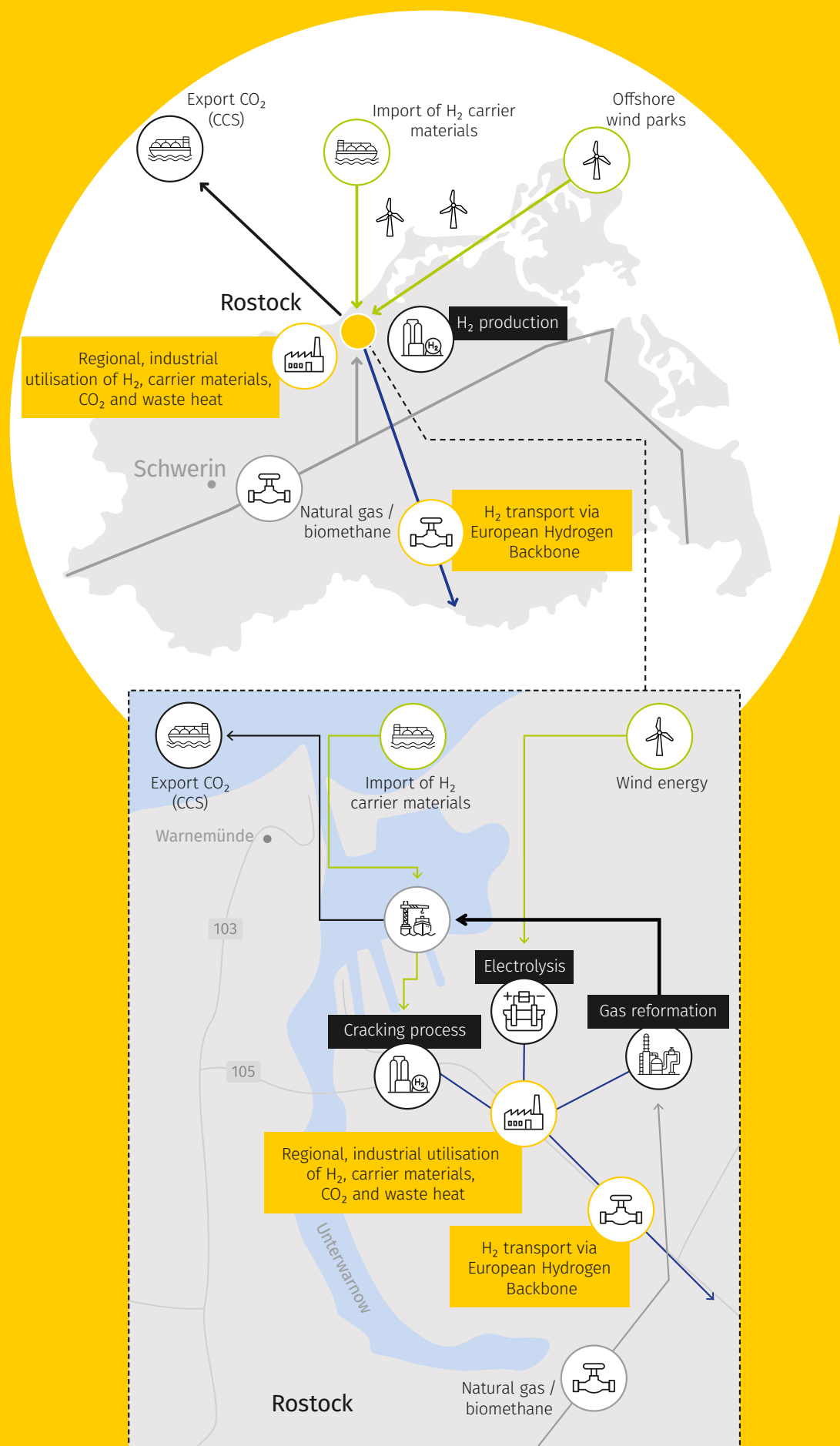


HYDROGEN HUB FOR INDUSTRIAL REGIONS IN CENTRAL GERMANY

The Central German “Chemical Triangle” region will need green hydrogen in the future, just like the industrial companies in Saxony-Anhalt and the Salzgitter steel region around 200 kilometres away. In future, **Green Octopus Central Germany (GO!)** will interconnect these areas. In addition to the pipelines, there are plans to connect a hydrogen cavern with a working gas volume of 50 million cubic metres in Bad Lauchstädt. A hydrogen ring main around Leipzig is also planned as part of a sub-project. The initially independent IPCEI project called LHyVE Transport has been merged with the IPCEI project Green Octopus Central Germany.

According to the current planning status, GO! is set to go into operation before 2030 with a pipeline length of around 300 kilometres and become part of the European hydrogen pipeline network. GO! will utilise existing natural gas pipelines wherever feasible in order to work as cost-effectively as possible. The remaining connections will be newly built.

DEVELOPMENT OF THE ROSTOCK SITE



Energy and Chemical Hub Rostock

Development of the Rostock region into a hydrogen and CO₂ hub, thereby strengthening regional value creation in Eastern Germany.

AMMONIA IMPORT BY SHIP TO ROSTOCK

Green gas from Chile to supplement energy supply in Germany

Large volumes will have to be imported, however, to satisfy the demand for hydrogen in Germany. That is why we are cooperating with TE H2, a subsidiary of the French company TotalEnergies. In the windy Magallanes region of Chile, a 2 GW electrolyser is to be operated using 3 GW of wind power. In order to transport the hydrogen produced in this way by ship, it is converted into ammonia on site. Under the **TEM** project, VNG plans to import around 600,000 tonnes of green ammonia to Germany by ship from 2030. In Rostock, the ammonia will be converted back into green hydrogen.

FOCUS ON DECARBONISED HYDROGEN


German-Norwegian project plans low-CO₂ production of blue hydrogen

As part of the **H2GE** (H₂ to Germany) project, we are working with our partner Equinor on solutions to establish Rostock as a central hub for low-CO₂ hydrogen and carbon management solutions in Eastern Germany.

The plan is to build a gigawatt decarbonisation plant to convert Norwegian natural gas. According to the current project status, the resulting CO₂ will be liquefied and transported back to Norway by ship for permanent offshore storage. The aim of the project is to contribute to a secure base load supply of hydrogen for industry in Eastern Germany.

Up to
230,000
tonnes
of hydrogen to be produced annually

Warnemünde harbour area in Rostock.



**BIOGAS IS AN
ENERGY SOURCE
THAT CAN BE
PRODUCED AT ANY
TIME, REGARDLESS OF
THE WEATHER**

Our projects for biogas and biomethane

BIOGAS – AN OPTION FOR CLIMATE-NEUTRAL ENERGY SUPPLY ALREADY AVAILABLE TODAY

Biogas is an important component of the decentralised energy system of the future and already offers the possibility of permanently increasing the proportion of green gases in the grid. Together with our subsidiary BALANCE, we are driving forward various biogas projects.

Biogas offers a decisive advantage over renewable energies from wind and sun: production is not dependent on the weather. Biogas is therefore base load-capable, which means that it can be made available at almost any time. Biogas is used in combined heat and power plants to produce heat and electricity, and can also be processed into biomethane and fed into the conventional natural gas grid. As a regionally produced and base load-capable energy source, biogas therefore makes an important contribution to security of supply.

As a rule, almost CO₂-neutral biogas production only produces as much CO₂ as the plants have absorbed during their growth. Biogas from liquid manure and residues from animal production can even be CO₂-negative because natural GHG emissions can be avoided during liquid manure storage, and residues left over after biogas production can also be recycled as natural fertiliser. This approach enables VNG to secure a climate-friendly energy supply as well as regional value creation. Biogas provides a sustainable alternative income for farmers and secures jobs in rural areas. In 2023, BALANCE and its 172 employees will operate a total of 40 biogas facilities with a rated thermal output of 178 MW.

Twelve plants also have a processing plant and feed biomethane with natural gas quality into the gas network. The conversion of further systems is planned. This option will become particularly interesting when the first biogas facilities cease to be subsidised from 2026 under the EEG (Renewable Energy Act).



WIDE RANGE OF UTILISATION OPTIONS

BALANCE SUPPORTS SUSTAINABLE LOCAL STRUCTURES

We are also driving forward the transformation of the energy system with small biogas projects on a decentralised basis. In their entirety, they symbolise the variety of possibilities that biogas facilities offer the region. We generate renewable electricity and heat using our own combined heat and power plants. Both are fed into municipal grids to supply customers with climate-friendly energy. In addition to municipal utilities, this includes commercial enterprises and large nurseries. Agricultural businesses also benefit from biogas facilities nearby, for example by putting liquid manure and other residues to further use. This provides them with a sustainable and secure alternative source of income.

BY-PRODUCTS FROM BIOGAS PRODUCTION

CARBOXYLIC ACIDS CAN BE USED FOR LUBRICANTS, MEDICINES OR COSMETICS

The production of biogas becomes more economical if by-products are created that can also be commercially marketed. The **CapUp** project of the Helmholtz Centre for Environmental Research and the German Biomass Research Centre is investigating how this is possible.

BALANCE is involved as an associated partner. The focus is on a process with which carboxylic acids can be obtained – these are valuable speciality chemicals that can be used in a variety of ways, for example in the lubricant sector, in medicines, cosmetics, animal feed or foodstuffs. Carboxylic acids obtained from biogas production can also be a sustainable alternative to palm kernel and coconut oil.



We are in the middle of a fast-paced transformation process towards green energy sources such as biogas and hydrogen. Both areas are a key component of our “VNG 2030+” strategy and the focus of our investments. We draw on the knowledge and experience we have acquired over decades and, together with experienced partners, apply it to forward-looking projects.”

– Hans-Joachim Polk
Member of the Executive Board



SUPPORTING STRUCTURAL CHANGE

As a structurally significant company in Eastern Germany, we want to maintain the strength of the regional economy, and contribute to the prosperity and quality of life of society with our investments in modern infrastructure, green gas projects and our social commitment.

Future
investments

Social and civic
responsibility

Digital Infrastructure

University &
education

Shaping structural change, securing prosperity

As a Leipzig-based company, we feel a strong connection to our home region and have clearly defined our mission: We want to play a key role in supporting structural change and regional development in Eastern Germany with our business activities, projects and initiatives.

For us, structural change means that we are primarily looking at the changes in the energy industry that our region is facing 34 years after reunification. Eastern Germany wants to transform itself from an industrial region relying on fossil fuels into a model region that leads the way in the transformation to climate-friendly energy generation and use. The common denominator is renewable and decarbonised energies, above all hydrogen and biogas.

In particular, we are focusing on the necessary infrastructure such as transport lines, storage facilities and electrolysers, as well as the provision of green energy for industry and society. With our operational facilities,

experience and future investments, we are part of the transformation and are helping shape the changeover to a reliable, economical and increasingly climate-neutral energy system in Eastern Germany.

However, structural change means more than just decarbonising the energy and raw materials base. It encompasses many other facets: industrial, ecological and digital transformation processes as well as demographic, social and cultural change. This complexity must be recognised and managed. This makes VNG's social and civic activities, which are largely organised under the umbrella of the VNG Foundation, all the more important.

**STRUCTURAL
CHANGE MEANS
MORE THAN THE
DECARBONISATION
OF THE ENERGY
AND RAW
MATERIALS BASE**

OUR STRENGTHS: GAS INFRA-STRUCTURE, THE POWER TO CHANGE AND COMMITTED EMPLOYEES

We believe we are well positioned for the major transformation tasks in the Eastern German energy supply. With the long-distance pipeline network of our independent subsidiary ONTRAS and the natural gas storage facilities of VNG Gasspeicher, we are well placed to convert pipelines to hydrogen and build clusters for the hydrogen economy. This expertise has grown historically at VNG: this is because the town gas used until the early 1990s already contained up to 50 percent hydrogen and was transported via pipelines, many of which are still intact today. By converting these natural gas pipelines to hydrogen, considerable costs can be saved as part of the energy transition.

As an energy group with more than 20 companies, we bundle many H₂ competencies under one roof. Thanks to the expertise, the power of change and the commitment of our 1,700 employees, this results in numerous synergies along the entire gas value chain.

The energy transition is a task for generations and can only be solved together. Networks, initiatives and cooperation models are necessary for successful implementation. VNG has maintained close partnerships with many different players in Eastern Germany for many decades. These primarily include our customers, the municipal utilities, distributors and industrial companies in the region.

“

As a key player in the economic structure, we also want to invest in the future viability of the region. We ensure that our customers reliably receive the energy they need today and tomorrow. At the same time, we are aware that a democratic, cosmopolitan and diverse society is a prerequisite for success in the competition between regions in a closely interwoven Europe.”

– Bodo Rodestock

Member of the Executive Board, Finance / Human Resources



Eastern Germany equipped for structural change

Eastern Germany is equipped for the energy transition and the ongoing structural change. In particular, the federal states of Mecklenburg-Vorpommern and Brandenburg can generate significant amounts of sustainable energy. Both of these states also have considerable expertise in the field of power plant technology. Saxony-Anhalt has wide-ranging experience in the chemical industry and a sophisticated gas storage infrastructure. The federal state of Saxony has a high level of expertise in mechanical and plant engineering. Thuringia's strengths lie in safety, measurement and control technology and instrumentation.

Eastern Germany is particularly suitable as a model region for the hydrogen economy because it is home to a large number of industrial companies that require a lot of energy that does not lend itself to electrification.

These include the refineries in Schwedt and Leuna, the Central German "Chemical Triangle" region and the iron and steel industry in Eisenhüttenstadt. Companies will have to make their production climate-neutral in the coming years and are dependent on renewable and decarbonised gases.

In addition, import points on the Baltic Sea, potential border crossing points on the Polish border and projects for the regional production of hydrogen are being planned. VNG is involved in many of these hydrogen projects.

The refineries in Schwedt and Leuna will need renewable and decarbonised energy in the future as will the iron and steel production in Eisenhüttenstadt.

**COMPANIES
MUST MAKE THEIR
PRODUCTION
CLIMATE-NEUTRAL
IN THE COMING
YEARS**

Hydrogen projects from the Baltic Sea to Leipzig

We see ourselves as pioneers in the development of the hydrogen economy in Eastern Germany and are working on a variety of projects to switch to green gases. For us, the focus is on the entire value chain, i.e. the import, production, trade, transport and storage of hydrogen.

In Rostock, we are working together with the Norwegian energy company Equinor, and with other local and regional partners to develop the port of the Hanseatic city into a hub for hydrogen. We see enormous potential at Germany's largest harbour on the Baltic coast to produce enough hydrogen for the base load supply of Eastern German industry. The harbour also enables the international import of green ammonia by ship and, in the future, the export of carbon dioxide.

We are also testing the entire value chain of green hydrogen on an industrial scale on the site of our underground gas storage facility in Saxony-Anhalt. The hydrogen flagship project in Bad Lauchstädt has already been labelled with two superlatives: It is currently the only real-world laboratory in Germany that is in the realisation and construction phase, and the first project with a contractually fixed customer

for green hydrogen. The hydrogen produced will be delivered to the TotalEnergies Raffinerie Mitteldeutschland in Leuna, just 25 kilometres away, from the end of 2025.

The first supply contract for green hydrogen marks a milestone in the hydrogen ramp-up, with many more collaborations to follow.

In other Eastern German states, we also cooperate with companies from the chemical, steel, building materials, glass and paper industries. In Central Germany, for example, we are planning industrial-scale electrolysis plants with our Dutch partner HyCC to supply local chemical companies with green hydrogen. In the Lausitz region, we are also examining what local hydrogen production, including a regional value chain, could look like.

A reliable transport network is crucial for the future of the hydrogen economy. It is one of the pioneering infrastructure projects of the hydrogen ramp-up. As part of the H₂ core network planned throughout Germany, ONTRAS intends to use its pipelines to open up large parts of Eastern and Central Germany for hydrogen

and to connect the generation and consumption centres, import points and storage facilities. Links to the emerging European hydrogen system are also planned.

The preliminary planning and feasibility studies for the hydrogen network in eastern Germany have long since begun. The ONTRAS subsidiary INFRACON plays a key role in this. In various studies, including for the Lausitz, Chemnitz and Dresden regions, it has analysed potential expansion scenarios and routes in order to connect local large-scale consumers and industry to the future H₂ infrastructure.



Additional information

about the Bad Lauchstädt Energy Park can be found on **page 22**.



Further information

on hydrogen and the H₂core network can be found from **page 25**.



More information

on the H₂GE project and our Rostock site can be found from **page 26**.



Drivers of digitalisation

BROADBAND FOR THE ECONOMY, SOCIETY AND THE ENERGY TRANSITION

Fast internet is needed for the digitalisation of the economy and society. It has an influence on how we live, how we work and how we communicate. At the same time, it is the basis for economic activity and driving innovation forward.

One of the prerequisites for digitalisation is the digital infrastructure. It is the basis for the increasingly decentralised energy system of the future. If you want to balance energy supply and demand efficiently or control it smartly, you need high-quality, high-speed, reliable internet.

VNG has been involved in this area for many years and will continue to extend its commitment. The focus is on activities in the fibre optic backbone, the fibre optic distribution network (FTTx) and services in connection with digital infrastructure. Our focus region is on Eastern Germany, with the emphasis on our gas pipeline assets and rural areas. We have built up a broad network of equity stakes and partnerships that covers almost all areas from planning, construction and operation of digital infrastructures to house connections. Current expansion projects for new fibre optic lines are currently under way in five towns and municipalities in the federal state of Saxony as well as via the joint venture wittenberg-net GmbH of Stadtwerke Lutherstadt Wittenberg and GDMcom in Lutherstadt Wittenberg in Saxony-Anhalt. Further construction projects in Central Germany are currently being planned and prepared.

6 FTTX projects

in the region, VNG operates GDMcom with its subsidiaries and holdings.

Expansion of the digital infrastructure with new fibre optic lines in Lutherstadt Wittenberg.



Biogas: Regional added value

While the realisation of most of our hydrogen projects still lies in the future, we are much further along in establishing and expanding our biogas portfolio. Our subsidiary BALANCE operates 40 biogas facilities in Northern and Eastern Germany, generating regional and renewable energy with a rated thermal output of over 178 MW. In purely mathematical terms, this corresponds to green electricity for around 57,000 households and green gas for up to 63,000 households. In addition to the efficient operation of the systems, we also invest in existing and new system concepts, and in developing them further.

Our biogas facilities are integrated into a vital and sustainable circular economy that benefits all partners involved. They secure jobs in agriculture, are closely networked with the local economy and are therefore an impressive example of regional value creation.

As a regionally produced energy source, biogas also contributes to the security of supply of renewable electricity, gas and heat in Central and Eastern Germany.

40
Biogas
plants
are operated by
VNG subsidiary
BALANCE in
Northern and
Eastern Germany.

**OUR BIOGAS FACILITIES
CREATE REAL ADDED
VALUE IN THE REGIONS
IN WHICH WE OPERATE**





Award of the VdW Engagement Prize to five German associations in September 2023.

Social commitment in Eastern Germany

Social commitment to promote a lively civil society has always been anchored in our corporate identity. We are focusing our activities in the regions of Central and Eastern Germany. Social issues, education, sport, art and culture are at the top of the agenda, as are diversity and tolerance. At the forefront of its social activities are the VNG Foundation and its initiative “Verbundnetz der Wärme” [Network of Warmth].

MORE MOMENTUM FOR VOLUNTARY WORK

Voluntary work often remains unrecognised, even though it is one of the mainstays of our society. VNG therefore launched the Verbundnetz der Wärme (VdW) back in 2001. The aim is to promote engagement and voluntary work in Eastern Germany so that these projects can contribute to solving social challenges. The VdW sees itself as a joint learning engagement platform that builds a network between associations, foundations and political institutions. Each year, the VdW also awards 5 x 5,000 euros in prize money in the areas of knowledge and learning, nature and climate, health and sport, participation and integration as well as culture and history. The VdW

has been supported by the VNG Foundation since 2009. For many years, it has also been networking with other regionally active foundations and umbrella organisations in order to jointly achieve an even greater reach. In 2023, the VNG Foundation conducted its first study on the topic of “Voluntary work in Eastern Germany – challenges and opportunities”. The results were presented at the National Foundation Day 2023 in Berlin, among other events. Since then, the study has been repeated annually. The VNG Foundation is also regionally involved in the Leipzig Public Welfare Round Table and in awarding the City of Leipzig’s Future Prize.

5 x 5,000 euros

The VdW awards 5 x 5,000 euros in prize money to associations and projects as part of its annual nomination event.

COOPERATION BETWEEN BUSINESS AND SCIENCE

Cutting-edge research, high-performing universities and the rapid transfer of expertise to companies are of central importance in shaping change processes. This makes it all the more important for business and academia to work closely together and jointly shape the transformation in Central and Eastern Germany. We have been cooperating with universities, universities of applied sciences and scientific institutions for many decades in the form of practical lectures, accompanying studies and sponsoring students doing master's, diploma and doctoral theses. The VNG Foundation also supports young students by awarding Germany Scholarships at the Universities of Leipzig, Dresden and Chemnitz, the Freiberg University of Mining and Technology, the Leipzig University of Applied Sciences (HTWK) and the Erfurt University of Applied Sciences. Young women are also supported at HHL Business School Leipzig through the awarding of "women's scholarships". We also work closely with the University of Leipzig, where the VNG Foundation is actively involved in the University Society.

Welcome Day 2024 for the German holders of scholarships from the VNG Foundation.



THE VNG FOUNDATION SUPPORTS YOUNG STUDENTS BY AWARDING SCHOLARSHIPS FOR GERMANY

DIVERSITY AND TOLERANCE FOR DEMOCRACY AND AN ACTIVE CIVIL SOCIETY

Since 2024, the VNG Foundation has been part of the initiative "Zukunftsweg Ost" [Way Forward East] under the patronage of the Federal Government Commissioner for Eastern Europe. Among other things, the initiative is committed to sustainably strengthening democratic civil society – especially in rural areas of Eastern Germany.



VNG FOUNDATION

Year founded: 2009

Place established: Leipzig

Sphere of activity: Eastern and Central Germany

Focal points: Promotion of sustainable and innovative projects in the social sector, in the education and science sectors, in sport, in the arts and culture and in the voluntary sector

Partnerships with universities: Support for students with scholarships, research projects on the topics of raw materials, hydrogen and AI solutions, lecture and seminar series on the topics of hydrogen, the energy transition in heating and AI solutions

Voluntary project: Engagement platform "Verbundnetz der Wärme"

GROUP MANAGEMENT REPORT

39 VNG at a glance

- 39 Business model and strategic direction of VNG
- 41 Financial performance indicators and targets
- 41 Research and development

43 Report on economic position

- 43 Conditions on the market
- 45 Energy policy

47 Human resources and organisation

- 47 Changes in headcount
- 47 Non-financial performance indicators

50 Performance of VNG's business areas

- 50 Transport
- 51 Storage
- 52 Trading & Sales
- 53 Biogas
- 54 Digital Infrastructure

55 Financial position, performance and cash flows

- 55 Overall assessment
- 56 Financial performance
- 57 Cash flows
- 58 Financial position

59 Opportunities and risk report

- 59 Risk management system
- 59 Operating opportunities and risks
- 62 Overall assessment of the risk situation
- 62 Compliance management system
- 63 Financial risk management

64 Outlook



VNG at a glance

1. BUSINESS MODEL AND STRATEGIC DIRECTION OF VNG

VNG is a group of companies active throughout Europe with over 20 entities and around 1,700 employees. With its head office in Leipzig, the Group offers a broad and sustainable portfolio of gas-related services covering the majority of the gas value chain via international import and wholesale, as well as the operation of critical gas infrastructure. VNG is also pursuing an ambitious path for a market ramp-up of renewable and decarbonised gases such as biogas and hydrogen.

Against the backdrop of a dynamic and challenging environment, VNG revised its “VNG 2030+” strategy in the reporting year and thus set a key course that takes into account not only economic, but also demanding energy policy and social requirements. As part of the update, VNG is accelerating the further transformation of the company with a focus on a decarbonised, gas-based and digital future.

Overall, the strategy update is based on three target dimensions that outline the company’s path to an increasingly climate-neutral energy system: ensuring a reliable and secure gas supply, shaping the energy transition through the transformation from fossil natural gas to green gases and supporting structural change in Eastern Germany with investments in future projects and gas infrastructure. Overall, VNG intends to invest up to € 5 billion gross in new businesses and infrastructure by 2035. A solid capital base and the successful reporting year 2023 has created a good starting position for this.

To implement its strategy, VNG is currently focusing on the following business areas and segments:

Transport: ONTRAS Gastransport GmbH (ONTRAS) operates a transmission network in Eastern Germany with a total length of around 7,700 kilometres, and is responsible for reliably and efficiently transporting energy in the form of gas – today and in the future. This means that the infrastructure forms an integral part of both Germany’s and Europe’s gas transmission network.

In addition to the transportation business, ONTRAS and its subsidiaries also operate telecommunications and refuelling infrastructure for alternative, gas-based fuels, and provide a wide range of network-related and gas-related services in the non-regulated sector. ONTRAS transports climate-neutral gases via the 23 biogas feed-in facilities situated within its network territory, as well as the feeding in of hydrogen and synthetic methane via two power-to-gas facilities. With the development of an H₂ starter network for Eastern Germany, as part of the Germany-wide H₂ core network, ONTRAS intends to make its contribution to the European Hydrogen Backbone by 2030 and at the same time lay the groundwork for hydrogen transportation in the region.

Storage: As Germany’s third-largest provider of storage capacity, VNG Gasspeicher GmbH (VGS) operates storage facilities in Central and Northern Germany, and markets around 2.4 billion m³ of process gas throughout Europe. VGS also functions as a technical plant manager for third-party storage facilities, and provides engineering services in the fields of plant engineering

FIVE

billion euros

VNG plans to invest five billion euros gross in new businesses and infrastructure by 2035.

and measurement technology. Furthermore, VGS has been the sole shareholder in Erdgasspeicher Peissen GmbH (EPG) since October 2023, which operates and is expanding the “Katharina” underground storage facility in Bernburg, Saxony-Anhalt. Depending on their location, the underground gas storage facilities will be considered in terms of their future use for hydrogen and prepared in line with their economic viability. The first hydrogen storage facility is planned with a cavern as part of the Bad Lauchstädt Energy Park and is currently in the project phase of this “real-world laboratory of the energy transition”.

Trading & Sales: Both in its domestic German market and in Poland, Italy, Austria and the Czech Republic, VNG Handel & Vertrieb GmbH (VNG H&V) and its foreign investments supply natural gas to distributors and trading companies in addition to public utility companies, industrial customers and power plants. VNG H&V also offers its customers services such as balancing Group and portfolio management. VNG H&V uses large-volume storage and transportation capacities to supply its customers and thus makes a significant contribution to the security of supply, which has been ensured at all times even given the extraordinary pricing and import situation on Europe’s gas trading markets. As part of the strategy update, the Trading & Sales business area will focus on diversified procurement and the gradual transformation of the procurement portfolio towards renewable and decarbonised gases. In this regard, VNG relies in particular on international partnerships to secure the supply of hydrogen. The focus for hydrogen sales is on industrial companies based in Eastern

Germany that are active in the chemical, steel, construction materials, glass and paper industries, for example.

Biogas: VNG bundles its activities relating to biogas as a fuel via BALANCE Erneuerbare Energien GmbH (BALANCE) and its subsidiaries. For VNG, biogas is an important element of the decentralised energy system of the future, and provides a way to increase the share of green gases in the gas network in the long term. The current geopolitical developments have also caused the focus to shift toward its importance as a regionally produced, more secure and carbon-neutral fuel. Therefore, the Biogas business area is one of the central growth areas as part of the “VNG 2030+” strategy. In the financial year 2023, several measures to diversify production options were implemented as part of the site development. Depending on the market situation and customer demand, reliable electricity, heat and raw biogas can be offered regionally, as well as biomethane marketed via the natural gas grid nationwide.

Digital Infrastructure: Digital Infrastructure represents a further growth area of the “VNG 2030+” strategy. Since 2022, VNG has established and further expanded the field as an independent business area in order to sustainably strengthen and simultaneously diversify VNG’s earnings base. The focus is on activities in the fibre optic backbone, the fibre optic distribution network (FTTX¹) and services in connection with digital infrastructure. Growth in the FTTX business in particular should be focused on regional networks or as part of collaborative partnerships.

Green Gases: The Green Gases area pools the Group’s activities relating to renewable and decarbonised gases, develops projects in this area and drives them forward. The projects are aligned to the value added areas of generating, transporting, storing and marketing. The focus in this respect is on hydrogen and its derivative products, as well as biogas, biomethane and CO₂ as a resource. In 2023, the Green Gases project portfolio was expanded further in accordance with the roadmap and a vision for green gases and projects, and cooperation with collaboration partners was driven forward. With the final investment decision on the Bad Lauchstädt Energy Park and the associated transition to the construction phase, the Green Gases area has reached a key milestone. The area is also dedicated to supporting the hydrogen market ramp-up.

Innovation: VNG Innovation GmbH (VNG Innovation) invests in early-stage start-ups that focus on the energy sector. VNG Innovation is supporting these start-ups with financial resources, as well as with the necessary infrastructure and its internal know-how. A partnership has been entered into in this context with SpinLab – The HHL Accelerator in Leipzig. VNG Innovation is one of two anchor investors in the “Smart Infrastructure Ventures” venture capital fund, which focuses on supporting start-ups during their seed phase.

¹ Fibre to the x, various expansion stages of fibre optic networks.

2. FINANCIAL PERFORMANCE INDICATORS AND TARGETS

VNG's strategic direction is based on economic performance indicators, and matches its financial strategy. This strategy is aimed at profitable business activity, creates transparent financial guidelines, and assesses the viability of the strategic direction. In addition to the company's own internal financing capability, the main instruments in the diversified financing portfolio are a syndicated loan agreement, plus promissory note and shareholder loans. In addition, a one-year line of credit with an extension option and a short-term money market loan were concluded in 2023.

VNG's financial strategy is based on the following core goals: generating positive cash flows, a suitable, risk-adjusted return, and avoiding risks to the Group's ability to continue as a going concern. The Group is mainly managed on the basis of adjusted EBIT. Non-recurring effects on earnings, which cannot be planned for, are not taken into consideration. Other financial targets relate to the cash flow indicator "funds from operations" (FFO), as well as the levels of net financial liabilities, the equity ratio and gross/net investment. The focus is placed on performance indicators and information relating to the whole Group when it comes to steering the operation, monitoring forecast quality and reporting to executive management, the Supervisory Board and shareholders. These figures are arrived at in accordance with International Financial Reporting Standards (IFRSs).



More information

about the Bad Lauchstädt Energy Park can be found on **page 22**.



Further information

on the TransHyDe project can be found **on the Internet** [↗](#)

3. RESEARCH AND DEVELOPMENT

VNG is conducting research and development projects throughout the entire value chain for decarbonised gases. The projects in the R&D portfolio were driven further forward in the reporting year.

Bad Lauchstädt Energy Park implements the entire value chain for green hydrogen, from generation and storage to transportation and marketing, on an industrial scale. As part of the "real-world laboratory for the energy transition", the project receives funding from the Federal Ministry for Economic Affairs and Climate Action (BMWK). In addition to VNG AG, ONTRAS, VGS and VNG H&V, other industrial and research partners are involved in this project. A key milestone was reached in 2023 with the consortium's final investment decision. The construction phase then started in June 2023. The construction of the wind farm and the electrolyser as well as the repurposing of the transport pipeline were driven forward by the consortium partners. TotalEnergies Raffinerie Mitteldeutschland was also signed up as the first anchor customer.

VNG is involved in the Federal Ministry of Education and Research's **TransHyDE** hydrogen transportation project as a syndicate partner. The project is being supported as part of the "Hydrogen Republic Germany" programme. The aim is to conduct research into and demonstrate possible ways of transporting hydrogen. VNG is a project partner in the system analysis sub-project. Work to evaluate the transportation options for importing

hydrogen continued in the reporting period. VNG participated in studies on the topics of "Ammonia in the energy system", "Supply options for a steelworks" and "H₂ import terminals". The results were presented at public lectures, for example at the European Hydrogen Week.

VNG is also involved in the **CapTransCO₂** project aimed at building up a CO₂ transportation infrastructure. Together with industrial and research partners, the project is investigating the feasibility of a climate-neutral industrial sector in Central Germany by building up a networked CO₂ transportation infrastructure for carbon capture and utilisation (CCU) and/or carbon capture and storage (CCS). The project will be funded under the 7th Energy Research Programme of the Federal Ministry for Economic Affairs and Climate Action (BMWK). Within the project, VNG is looking into the technical and legal feasibility of a CO₂ transportation infrastructure, including interim storage. In 2023, work was completed on the legal framework for CO₂ transportation in Germany, CO₂ specifications, pipeline routing and operating costs as well as the design of a cavern storage facility.

VNG and Balance are also involved as associate partners in the **CapUp** project, which is investigating the production of medium-chain carboxylic acids as an additional product at biogas plants. The project is based on a process developed by Helmholtz-Zentrum für Umweltforschung GmbH (UFZ) and Deutsches Biomasseforschungszentrum gemeinnützige GmbH (DBFZ) on a larger laboratory scale. The aim is to scale up the

process by a factor of 10, produce sample quantities for product tests and carry out an economic and ecological assessment.

In addition to the ongoing projects described, VNG has also (jointly) commissioned and worked on a number of **studies** in order to increase knowledge in selected fields. These focused on analysing infrastructure, technologies and business models.

VNG has participated in the continuation of the **“Hydrogen Network Central Germany”** study, which is investigating a regional hydrogen distribution network in the federal states of Saxony, Saxony-Anhalt and Thuringia on behalf of 54 private and public sector partners. The study is being coordinated and conducted by the organisation Europäische Metropolregion Mitteldeutschland (European Metropolitan Region of Central Germany), the HYPOS hydrogen network, DBI Gas- und Umwelttechnik GmbH and INFRACON Infrastruktur Service GmbH & Co. KG.

VNG is also sponsoring a study commissioned by the World Energy Council on the subject of **ammonia as an energy source**. This is being carried out by the TÜV Nord subsidiary, Energy Engineers.

In addition, VNG is a member on the advisory board of the **Funding Initiative Heat Transition** and the **Funding Initiative Hydrogen** of the Institute of Energy Economics at the University of Cologne (EWI). The initiatives aim to highlight new research topics and to network with players in the field. VNG is also an active member of the **HYPOS** (Hydrogen Power Storage & Solution East Germany e.V.) **network**, which promotes the establishment of a green hydrogen economy in Central Germany.



Further information

on the study Hydrogen Network Central Germany can be found **on the Internet** [↗](#)

Report on economic position

1. CONDITIONS ON THE MARKET

Macroeconomic developments: In the reporting year, VNG was confronted with a challenging economic environment characterised by rising inflation and the associated price increases for energy and end customer products. The European Central Bank and the US Federal Reserve responded with an historic increase in key interest rates. This not only had an impact on inflation, but also slowed economic growth. There was also a risk of bonds losing value, which had an impact on lending and lending conditions.

In the context of the global subsidy competition as part of decarbonisation between Europe and the US (Fit For 55 vs. Inflation Reduction Act vs. Green Deal Industrial Plan), it became clear that energy prices and carbon reduction measures act as a tool of competition policy. Government influence on the gas business has increased. This happened, for example, through the EU Taxonomy Regulation, the Delegated Act defining renewable hydrogen and the nationalisation of companies such as Uniper SE and SEFE Securing Energy for Europe GmbH.

In addition, Trading Hub Europe was commissioned to handle the procurement and storage of LNG. The German Gas Storage Act aims to ensure that filling requirements are met. Further challenges arose from price brakes for end customers and the role of the government in the hydrogen core network.

Economic development in Germany was characterised by continued stagnation, accompanied by declining inflation rates. A key element of this development was the ongoing impact of the energy price crisis, which led to a massive loss of purchasing power and weakened private consumption. The global economic situation, in particular the subdued growth momentum and geopolitical tensions, also contributed to this development. In the third quarter, gross domestic product (GDP) adjusted for price, seasonal and calendar effects fell by 0.1 percent. Forecasts for the final quarter of the year point to a further slight decline in GDP. In particular, the positive development of investments weakened in the third quarter due to lower order levels, unfavourable financing conditions and the expiry of the “Environmental Incentive”. Nevertheless, some consumer-related

indicators such as sales in the retail and hospitality sectors showed signs of a stabilisation in private consumption, albeit at a low level. Despite a more optimistic outlook for companies and private households at the end of the reporting year due to falling inflation rates and rising real incomes, the economic outlook in Germany remained subdued due to the global economic downturn, ongoing geopolitical crises and possible commodity price spikes.

Energy consumption trend: In the reporting year, Germany recorded its lowest energy consumption for a long time, primarily due to shrinking economic output. The Working Group on Energy Balances (Arbeitsgemeinschaft Energiebilanzen e.V.) recorded a year-on-year decline of just under 8 percent to 2.998 million GWh. This development is also linked to warmer weather conditions, which account for around a fifth of the reduction in consumption. The year-on-year fall in **energy prices** also played a role; these were still higher than in 2021 despite declines over the course of 2023. Electricity imports exceeded exports by 11,000 GWh, an increase of 41 percent compared to the previous year.

EIGHT
percent

ess energy was consumed in the year 2023 in Germany according to the Working Group on Energy Balances

In 2023, the **German natural gas market** recorded a 5 percent decline in consumption to 810,412 GWh. The price of natural gas has fallen below € 30/MWh since mid-May 2023 and was thus below the level in autumn 2021. This was boosted by high fill levels in storage facilities, savings in various sectors and supplies of LNG. The commissioning of German LNG terminals also helped to ease the situation on the gas market. **Gas prices in Europe** fell significantly in 2023 compared to 2022, partly due to a slower upturn in China. Renewable energies contributed 251,200 GWh to energy generation (7.5 percent above the previous year's figure). Onshore and offshore wind turbines achieved a combined share of 31.1 percent. Photovoltaics contributed 12.1 percent, while biomass accounted for 8.4 percent. The remaining 3.4 percent was attributable to hydro-power and other renewable energy sources. The statutory **gas fill level target** of at least 85 percent as of 1 October 2023 was exceeded and the target of 95 percent as of 1 November 2023 was also achieved. At the end of November, the fill level was already 100.07 percent.

According to the Federal Network Agency (BNetzA), the gas supply in Germany was stable in the reporting year. The starting position for winter 2023 / 24 is significantly better than in the previous year. Nevertheless, there are residual risks that continue to require responsible resource management.

Wholesale gas prices in €/MWh



Source: EEX, Federal Network Agency

The volatility of gas prices shows that the European energy market remains susceptible to supply disruptions or changes in global demand patterns. The representation above shows the daily development of wholesale prices in the German market area. The uncertainties on the global market could keep prices higher and more volatile than before Russia's invasion of Ukraine. Although gas storage facilities are full and the security of supply has been increased, the volatility of gas prices remains a key issue. A possible recovery in China,

which is providing less of a boost than expected, and the robust US economy could further influence the momentum on the global energy market.

Overall, the future of the German economy and the global energy market depends on numerous variables. The focus on renewable energies, the diversification of energy sources and increasing energy efficiency remain crucial for sustainable development in a volatile economic environment.

2. ENERGY POLICY

While 2022 was characterised by crisis management and securing supply security in terms of energy policy due to the consequences of the Russian war of aggression against Ukraine since 24 February 2022, which violated international law, 2023 saw a relative stabilisation in terms of energy supply in general and natural gas supply in particular. From VNG's perspective, key energy policy legislative processes were also driven forward and in some cases completed at a federal and EU level, which were not primarily aimed at crisis management. In particular, the amendment to the German Buildings Energy Act [Gebäudeenergiegesetz, GEG] was the focus of public attention and media coverage.

Towards the end of the year, the ruling by the Federal Constitutional Court on 15 November 2023 regarding the second supplementary budget for 2021 led to uncertainty at a federal level regarding the further financing of energy policy projects.

Energy policy developments at federal level: At the end of July, after lengthy delays, the Federal Cabinet decided to update the National Hydrogen Strategy. In order to meet the forecast hydrogen demand of 95 to 130 TWh including derivatives by 2030, the target for domestic electrolysis capacity has been raised from 5 GW to 10 GW by 2030. For example, the creation of an import strategy and a concept for hydrogen storage as well as a hydrogen acceleration law were also

announced, but these were not available by the end of the year.

Further steps have been taken with regard to the planning of the hydrogen core network planned in Germany by 2032. On 22 December 2023, the Bundestag, the lower house of the German parliament, passed an amendment to the German Energy Industry Act [Energiewirtschaftsgesetz, EnWG], which regulates the application for and approval of the hydrogen core network. In addition, on 15 November 2023, the Federal Cabinet approved a draft amendment to the EnWG, which is intended to regulate network development planning for gas and hydrogen as well as the financing of the hydrogen core network via an amortisation account. The parliamentary process will continue in 2024 and should be completed by the end of the first quarter. On 15 November 2023, the gas transmission network operators submitted their draft application for the hydrogen core network with a length of around 9,700 kilometres to the Federal Network Agency, which was subsequently consulted on until 8 January 2024. According to the current draft law, the formal application must be submitted to the Federal Network Agency by the transmission network operators by 21 May 2024.

With the amendment to the GEG and the German Heat Planning Act [Wärmeplanungsgesetz, WPG], two further key legislative projects of the federal government's energy and climate policy were completed in 2023. The laws came into force on 1 January 2024. The WPG

obliges federal states to carry out comprehensive heat planning for their territory.

The core of the GEG amendment is the introduction of the 65 percent renewable energy requirement for the installation of new heating systems in new buildings from 2024 and in existing buildings after the completion of municipal heating planning. The explicitly mentioned fulfilment options include, among others, the use of biomethane and H₂-ready heating appliances, with a transformation plan for the gas network being required for the latter technology.

On 15 November 2023, the Federal Constitutional Court ruled that the reallocation of € 60 billion from unused borrowing authorisations to combat the impact of the coronavirus pandemic to the climate and transformation fund was unconstitutional. In order to close the resulting funding gap for the budget year 2023, a supplementary budget was adopted on 15 December 2023. Due to the short-term adjustment requirements, there was no budget for 2024 by the end of 2023.

Various energy policy projects are behind schedule at a federal level. A carbon management strategy, a hydrogen acceleration law, an H₂ import strategy, a national biomass strategy, a national port strategy and a power plant strategy, among other things, should have been presented in 2023.

Energy policy developments at European level:

In November and December 2023, the EU Parliament and the Council of the EU reached agreements on the internal gas market directive and regulation. Formal approval by the institutions and publication in the Official Journal of the EU were still pending at the end of 2023. The internal gas market directive regulates, among other things, the unbundling of hydrogen networks. Vertical unbundling is to be carried out in the same way as in the gas and electricity market. Accordingly, all three unbundling models for natural gas (OU, ITO and ISO) are equally applicable to hydrogen networks – without an end date for their application. Horizontal unbundling does not apply to distribution network operators. Although horizontal unbundling is envisaged in principle for transmission network operators – i.e. the creation of a separate company for hydrogen network operators – an opt-out option has been created for the member states. According to the provisional agreement, the directive must essentially be transposed into national law within two years of its entry into force.

In November 2023, the EU Parliament and Council of the EU also agreed on a regulation to reduce methane emissions. This contains rules for oil, natural gas and coal infrastructure within the EU on monitoring, checking and eliminating methane leaks. From 2027, new import contracts for oil, gas and coal can only be concluded if the exporters meet the same monitoring, reporting and verification obligations as EU producers.

Formal approval by the institutions and publication in the Official Journal of the EU were still pending at the end of 2023.

The amended Renewable Energy Directive (RED III) was published in the Official Journal of the EU in November. The key points are the increase in the target for the share of renewable energies (RE) in 2030 from 32 percent to 42.5 percent (indicative increase of 2.5 percent) and the definition of various targets for individual sectors. Mandatory quotas for the use of renewable hydrogen have been set in the industrial and transport sectors.

A Delegated Act on the Renewable Energy Directive II (RED II) presented by the EU Commission in February 2023 to regulate the requirements for the purchase of electricity for the production of electricity-based fuels of non-biological origin (known as RFNBOs – renewable fuels of non-biological origin) such as renewable hydrogen to make them eligible to count towards the targets for the share of renewable energies in the transport sector finally came into force after the objection deadlines of the EU Parliament and the Council of the EU expired. In accordance with the RED III, the requirements also apply to offsetting against the RE targets of other sectors.

Human resources and organisation

1. CHANGES IN HEADCOUNT

The VNG Group had a total of 1,688 employees as at 31 December 2023. Compared to the previous year, the number of employees has therefore increased by 110.

| € million | 31/12/2023 | 31/12/2022 | Change (in %) |
|------------------------|--------------|--------------|---------------|
| Transport | 432 | 399 | 8 |
| Storage | 116 | 104 | 12 |
| Trading & Sales | 485 | 470 | 3 |
| Biogas | 171 | 156 | 10 |
| Digital Infrastructure | 269 | 252 | 7 |
| Group Centre | 215 | 197 | 9 |
| Total | 1,688 | 1,578 | 7 |

2. NON-FINANCIAL PERFORMANCE INDICATORS

Employees: Like the entire energy industry, VNG is undergoing a transformation that has gained significant momentum as a result of the events of the last two years. Above all, changes in the world of work, demographic trends on the labour market and the differentiated expectations of employees and applicants have a direct impact on HR work at VNG. The parallel transformation of the business model is also associated with a large number of new strategic plans and projects, which in turn entail new roles, tasks, responsibilities and requirements for VNG. The company’s HR strategy therefore focuses on empowering the organisation and all employees so that their individual professional development can be aligned with the company’s strategic goals. In consultation with employee representatives, senior management and HR have defined six strategic focus areas that VNG will prioritise for future-oriented HR work: Employer branding, learning culture, talent management, diversity, fairness and inclusion as well as leadership excellence, and “Next work – the future of work”. Detailed examples from the two topics of

leadership excellence and learning culture are presented below: With the new “Leadership Excellence 2030+” management development programme launched in 2023, VNG is promoting the exchange of experiences between managers at all management levels and across all business areas. Among other things, the programme teaches key skills for successful strategy implementation, the basics of healthy leadership and change management techniques. Establishing a learning culture that combines personal development and the company-wide development of competencies and skills ensures VNG’s competitiveness and future viability. In order to achieve this goal, the HR department has significantly expanded the range of training courses on offer and systematised the training needs analysis. It is also important to create a Group-wide understanding of a sustainable learning culture that promotes innovation and resilience, is firmly anchored in the development of managers and can be perceived in the corporate culture. A key indicator of employee satisfaction is the EnMAB survey, from which VNG derives measures in the aforementioned areas of action. Compared to the previous year, the participation rate increased significantly from 67 percent to 76 percent. The People Engagement

Index (PEI), which measures the motivation and commitment of employees at VNG on a scale of zero to 100, remains at a consistently high level of 80 in 2023.

Occupational health & safety: The health and safety of employees are crucial to a company's success and employee engagement. In the reporting year, VNG did not meet its target of improving the LTIF (lost time injury frequency) compared to the previous year (2023: 2.4; previous year: 0.4). Despite extensive efforts and progress in establishing and developing a culture of high levels of safety in the growing Biogas business area, VNG recorded an increase in occupational accidents in this area in the reporting period. In the interests of continuous improvement, the measures already introduced in the area of safety culture at BALANCE were further intensified. To strengthen knowledge transfer across the company, a group-wide exchange of experience on the topic of occupational safety took place with representatives from various VNG entities in the reporting year.

Responsibility towards society: Diverse engagement in the interest of an active and engaged civil society and to advance the common good has long been a part of VNG's corporate identity. This engagement is above all focused on the regions in which VNG and its subsidiaries operate, as well as the core areas of social welfare, science and education, sport and art/culture, and

targets the public at large in the municipalities of Eastern and Central Germany in particular.

VNG bundles numerous social activities via the VNG Foundation in order to operate these in a sustainable manner. At the forefront of this is the "Verbundnetz der Wärme" [District Heating Grid] initiative and cooperations with universities.

By promoting societal engagement in the "Verbundnetz der Wärme" project, the network of associations, foundations and state representatives was expanded in the reporting year; targeted platforms such as round tables also made it possible to address current topics in voluntary work and bring network partners together. The highlight was the presentation of the engagement award in the five engagement categories with the VNG Foundation not only honouring societal commitment, but also giving those volunteering the opportunity to draw public attention to their projects. In the reporting year, the VNG Foundation continued its study on the topic of volunteering in Eastern Germany. Furthermore, the VNG Foundation supplemented its regional engagement by awarding "Deutschlandstipendium" scholarships and participating in studies at various regional universities such as the University of Leipzig and the Technical Universities of Dresden and Chemnitz and once again supported selected initiatives in the areas of sport, art and culture in the reporting year. In the reporting year,

the VNG Foundation was actively involved in panel discussions, jury meetings and ceremonial scholarship awards, thereby positively underscoring VNG's societal engagement in a public sphere. In addition, the foundation capital was also further strengthened in the reporting year.

Sustainability: Since the end of 2020, VNG has been working with a cross-functional and cross-business area sustainability team to set up the structure of the company as one that acts sustainably, build a professional, modern, systematic and measurable management system and create transparency across all sustainability activities. VNG's first voluntary sustainability report describes the current status quo. It covers all sustainable activities and measures identified as material for the group entities VNG AG, VNG H&V, VGS, ONTRAS and BALANCE and is published on the VNG AG website. The report complies with the requirements of the established reporting standard of the Global Reporting Initiative (GRI). The first instalment covers the financial year 2022 and was published in autumn 2023. The VNG Sustainability Report is updated annually.

The process of establishing a cross-company sustainability organisation that measures, monitors and manages VNG's sustainability activities is ongoing. The framework consists of 11 focus topics that were identified in the course of a materiality analysis by VNG in the three ESG

action areas (Environmental, Social and Governance). These topics are highly relevant for external stakeholders and are associated with a correspondingly high level of impact on the company.

VNG has committed itself to the three ESG action areas “energy supply of the future”, “responsible employer” and “value-oriented and transparent practices” and has made them the guiding principles of sustainability.

Our ESG fields of activity



Performance of VNG's business areas

1. TRANSPORT

Economic development: In the past financial year 2023, ONTRAS and its subsidiaries made a significant earnings contribution in the lower triple-digit millions of euros to adjusted EBIT. While the previous year was burdened by higher expenses from impairment losses and increased energy costs, the fall in energy costs in the past financial year led to a corresponding improvement in earnings. In addition, a number of new regulatory provisions came into force at the start of the new regulatory period (capital cost adjustment model: simultaneous returns from new investments, KANU: flexibilisation of the regulatory useful life for new investments and VOLKER: consideration of relief energy as volatile costs), which had a positive effect on earnings. As an independent transmission network operator, ONTRAS has been subject to incentive regulations since 2010. Although the reporting year is the first year of the new regulatory period, the general sectoral productivity factor (Xgen) has not yet been finalised. ONTRAS was again certified with an efficiency value of 100 percent

for the fourth regulatory period. In addition, the Federal Network Agency consulted on a new equity interest rate of 7.09 percent for new investments from 2024 instead of the previous 5.07 percent. This therefore improves the investment conditions for all planned investments in natural gas infrastructure.

Projects for a climate-friendly gas supply: ONTRAS has continued to actively drive forward its hydrogen activities. The final funding decisions are still pending for the **doing hydrogen** and **Green Octopus Mitteldeutschland** projects applied for as part of the H₂ Important Projects of Common European Interest (IPCEI), for which ONTRAS at least received approval for the early start of measures in December 2022. The preparatory work for these projects got underway as planned. The conversion of around 25 kilometres of ONTRAS natural gas pipeline from Bad Lauchstädt to Leuna to transport hydrogen is also proceeding according to plan. The pipeline has already been disconnected from the natural gas system and the necessary reconnections for the further supply of gas have been completed.

In November 2023, ONTRAS commissioned a solar process heat plant to support gas preheating at the Kienbaum gas pressure regulator station in the presence of the Brandenburg Minister for Economic Affairs, Labour and Energy, Jörg Steinbach. The plant can save up to 1.8 million kWh of fuel per year and thus avoid up to 370 tonnes of CO₂ emissions.

In close consultation with political decision-makers, ONTRAS and the German transmission network operators developed a draft planning status for an initial hydrogen core network in July 2023 and, after several optimisation steps and the incorporation of pipeline reports from other network operators, submitted this as a draft application to the Federal Network Agency in mid-November 2023. A financing concept suitable for the capital market is now required to realise the hydrogen core network. A corresponding draft bill was passed by the Federal Cabinet in mid-November 2023 and submitted to the Bundesrat, the upper house of the German parliament.



More Information

on the **Green Octopus** Central Germany project can be found on **page 25**.

2. STORAGE

Economic development: In addition to the seasonal difference in gas prices, which is primarily reflected in the summer-winter spread (SWS), the extrinsic value of storage capacities has become significantly more important since the outbreak of the Russia-Ukraine war due to increased volatility. This leads to higher achievable mark-ups on the SWS in marketing processes and thus to noticeable added value in addition to the SWS.

German storage facilities started 2023 at a fill level of more than 90 percent. Due to the rather mild winter, the fill levels at the storage facilities were still very high at 64 percent at the beginning of the storage year on 1 April 2023. As a result, all fill level targets were easily met over the course of the year, and German storage facilities were completely full by mid-November 2023. Record fill levels were also observed across Europe. Easing concerns about supply bottlenecks caused the day-ahead price for gas to fall from highs of over € 300/MWh at the end of August 2022 to € 70/MWh at the start of 2023, with prices of less than € 25/MWh observed in summer 2023. This also led to a significant increase in the SWS. A similar trend can also be observed for the storage year 2024/25, albeit at a significantly lower level and with some fluctuations.

VGS was able to benefit significantly from these developments by marketing capacities before the start of the storage year 2023/24 and by some marketing of remaining capacities for the storage year 2023/24, as well as by marketing for storage years from 2024/25 onwards. The Storage business area generated adjusted EBIT in the high-double-digit millions of euros from its business operations in the reporting year.

Development of storage capacities: The capacity of the underground storage facilities was marketed in full in the storage year 2023/24. Investment activities are still partly characterised by capital expenditure on existing assets, with the aim of maintaining and optimising the asset structure in the long term. They also partly relate to the work that continued on the future hydrogen storage facility. This aims to contribute to a more secure, sustainable and economic energy supply for the future. A regular profitability analysis of all storage facilities is carried out, which takes the current changes in the market situation into account. These results have a significant influence on strategic decisions at VGS.

The dismantling of the Buchholz underground storage facility is complete. Residual work is still ongoing on the company premises. The storage facility at the Kirchheilingen site has also been successfully dismantled. The excavation site and the company premises were sold.

VGS develops and operates the Katharina underground gas storage facility via EPG. VGS is now the sole shareholder of EPG following the redemption of the shares held by Gazprom export LLC (GPE) in EPG in the reporting year. As a result, EPG is included in the consolidated financial statements as a fully consolidated company. In addition, VGS also acquired the loan receivable of the former second lender from EPG in the reporting year.

Sustainable business: As a company operating in the energy sector, VGS is committed to constantly improve as part of its sustainability strategy launched in 2020 in order to conduct its business with net zero CO₂ emissions in the medium term. The issue of reducing methane emissions is also very relevant for VGS. In a first step, methane emissions are recorded and reported and in a second step, measures are taken to prevent them. The company has already been researching energy-efficient storage methods, developing green gas storage products, renaturing dismantled facilities and working to protect nature and biodiversity for many years. In 2020, VGS also introduced climate-neutral storage.

3. TRADING & SALES

Economic development: The Trading & Sales business area's earnings continue to be mainly driven by gas sales to large customers and trading activities on the European gas markets. The diversified overall portfolio of gas supply contracts, storage and transport capacities was successfully managed through trading and achieved an extraordinary operating result. A less volatile market price environment than in the previous year favoured the acquisition of new business customers. Security of supply for municipal utilities, redistributors, industrial customers and power plants remained the focus of activities in the financial year 2023. VNG H&V has put the crisis year 2022 with the non-recurring high burdens from replacement procurement costs behind it and was able to utilise the strengths of its diversified trading portfolio. Overall, the Trading & Sales business area made a notable contribution to VNG's total comprehensive income with positive earnings in the low-triple-digit millions of euros.

Business with end consumers also remains an important source of earnings for VNG. goldgas GmbH (goldgas), which has its registered office in Eschborn, generated adjusted EBIT in the low double-digit millions of euros under continued extremely challenging market conditions in the past financial year. goldgas achieved this with a lower customer base in the electricity business, however, there was a significant increase in the customer base in the gas business. Investments in the end

consumer business in Poland and Austria also generated earnings in the low-double-digit million euro range. A prudent coverage policy protected the business with end consumers against expensive supplementary purchases, and ensured that supplies to customers were never interrupted. Dealing with the application for and processing of emergency aid and price brakes proved to be particularly challenging and was the case for all end customer suppliers.

The business customer sales organisations in Austria and the Czech Republic were able to acquire new customers in the industrial segment. Procurement and portfolio management for sales customers in those countries, as well as in Luxembourg and Italy, is also carried out centrally in Germany.

Polish wholesale activities remained stable at a high level. New sales customers were also acquired in Poland. The Polish energy market has some special aspects which means that the procurement of gas and electricity and risk and portfolio management will still be carried out locally in Poland. A significant number of customers are supplied using dedicated distribution networks. The unbundling of the grid and sales business of the Polish VNG subsidiary G.EN. Gaz Energia Sp. z o.o. was successfully carried out in accordance with national and European regulatory requirements as part of the unbundling process. Since the beginning of 2023, the grid business has been continued at G.EN. Gaz Operator Sp. z o.o. And the sales

business has been continued separately at G.EN. Gaz Energia Sp. z o.o. It was not yet possible to bring the tax proceedings in connection with a regular, ongoing tax field audit at HANDEN Sp. z o.o. (HANDEN) to a close. After a tax assessment notice was issued by the Polish tax authorities, HANDEN appealed against the notice at the Polish tax court and has been initially successful at the court of first instance. However, the tax authorities have already escalated the matter to the next higher court of instance.

Against the backdrop of intensified global and European efforts to tackle the climate crisis, VNG is focusing its trading and sales activities on decarbonised gases in the long term. In the financial year 2023, VNG H&V signed the first German supply contract for green hydrogen as a consortium partner in the Bad Lauchstädt Energy Park with the joint venture Elektrolyse Mitteldeutschland GmbH. Declarations of intent on the import of green or decarbonised ammonia have been agreed with other Norwegian partners. With the planned acquisition of bmp greengas GmbH, VNG H&V will also be able to significantly expand its biogas business and offer its customers a broad portfolio of green gases; the transaction is expected to be completed in the first quarter of 2024.

Demand for natural gas is expected to remain stable at least until the 2030s, particularly on the core German market. VNG is reorganising its procurement portfolio to ensure the security of supply. In addition to existing import relationships with Norwegian and Dutch suppliers,

40 biogas plants

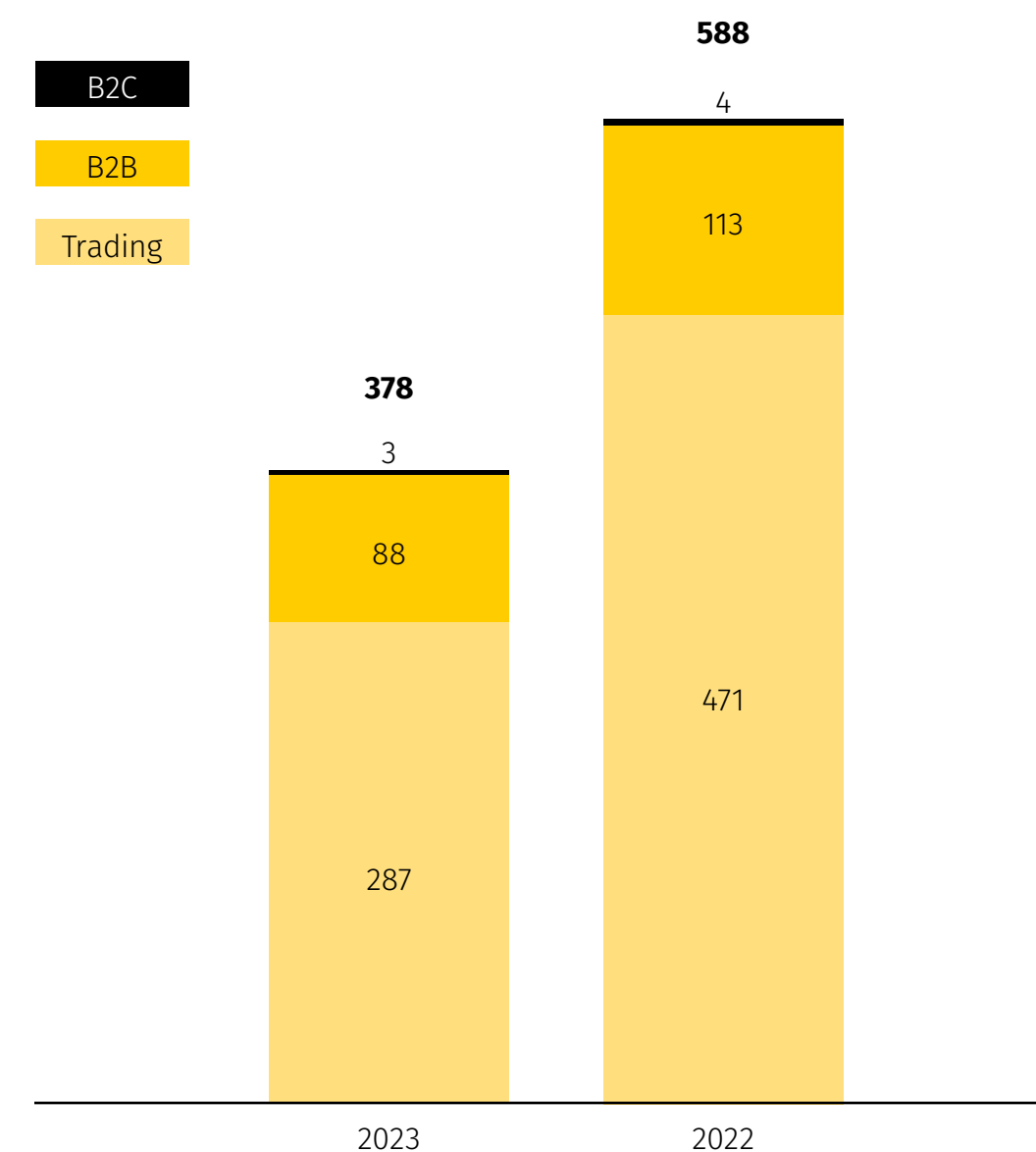
are operated by the VNG subsidiary BALANCE in eastern and northern Germany as of 31/12/2023.

new purchasing partnerships are also being driven forward. A new contract was concluded with an Algerian supplier; gas deliveries from Algeria began in January 2024. Beyond that, the possibilities for purchasing liquid gas have been exhausted.

Development of unit sales and procurement volumes:

In the financial year 2023, VNG's **gas send-out** amounted to 378 billion kWh, which was down year on year (previous year: 588 billion kWh). While sales to B2C customers remained almost stable, delivery volumes to B2B customers fell due to the limited sales activities in 2022 and potential gas savings on the customer side. The decline in the volume of trading is related to the reduced sales performance, and can be largely attributed to risk and portfolio management activities.

VNG's gas send-out [billion kWh²]



VNG **procured** 378 billion kWh of **gas** in total in 2023 (previous year: 595 billion kWh). The loss of supply volumes from Russia from 2022 onwards shifted gas procurements to other bilateral supply agreements with established partners and to trading activities on the European spot and futures markets. The long-standing connections with Norwegian gas producers remained stable.

4. BIOGAS

Portfolio expansion: The Biogas business area once again underwent expansion in 2023 thanks to BALANCE and its subsidiaries. The total number of biogas facilities operated by BALANCE rose during the reporting year to 40 facilities in Eastern and Northern Germany, consequently, installed firing thermal capacity³ rose to around 178 MW.

Economic development: The Biogas business area mainly generates revenue by feeding processed biogas into the natural gas network, marketing proceeds for converting the generated biogas into electricity and supplying renewable heat to customers in the vicinity of the biogas facilities. In 2023, there was a significant fall in electricity prices compared to the previous year. As a result, the operation of the respective plants had to be adapted to the specific locations, taking into account factors that optimise proceeds. The electricity generation costs, which are primarily driven by increased substrate prices, are compared with the electricity revenue achievable in the EEG business and in direct marketing. This was used to derive the operating method for the plant. In the biomethane market, the sales portfolio was adjusted in line with the continued volatile sales markets. Initial agreements were reached for existing contracts as part of price adjustment requests due to the changed market conditions. The Biogas business area generated adjusted EBIT almost in the double-digit millions of euros for the first time. Overall, BALANCE continued to up its focus on cost reduction as well as certification, sales and risk management processes in

² Excluding short-term arbitrage transactions

³ In 2023, the key performance indicator for firing thermal capacity (MWFTC) was changed so that the installed electrical BTTP output (base load and flex output) is now recorded instead of just the base load-oriented determination of output. The second component remains the biomethane processing capacity at the relevant locations.

the reporting year, enabling it to respond appropriately to the changed market situation. In the subsequent years, it will need to adjust the cost and revenue dynamic in the short and medium term via coordinated purchasing and sales activities. Changes to the underlying conditions from a European perspective and their implementation in national requirements are decisive in this respect. These relate primarily to the overarching goal of avoiding CO₂ and its economic pricing. In the Biogas business area, the focus therefore remains on the direction of economic, environmental and agricultural policy.

5. DIGITAL INFRASTRUCTURE

The market environment developed dynamically in the reporting year. The main drivers of this were rising inflationary pressure, higher expansion costs and changing conditions on the capital market due to constantly rising interest rate requirements. Although investments by network operators have increased continuously in recent years, the effects of macroeconomic circumstances with regard to the nationwide expansion of fibre optics are being realised with a time lag in some cases and therefore remain to be seen. Adjusted EBIT of the Digital Infrastructure business area was almost in the double-digit million euro range as at the end of the financial year 2023. VNG invests directly and indirectly in the expansion and operation of digital infrastructure via various investments and subsidiaries and works together with

public utility companies in Leipzig and Wittenberg, among other things. The focus of investment in the reporting year was on both the subsidised and self-funded expansion of the FTTX business in Central Germany. VNG has enhanced activities in the Digital Infrastructure area over the past few years and thus drove forward the diversification of the entire portfolio in addition to biogas and hydrogen activities.



Financial position, performance and cash flows

1. OVERALL ASSESSMENT

VNG generated **adjusted EBIT**⁴ of € 447 million in the financial year 2023, which is significantly above the previous-year level (previous year: € -205 million) and expectations. The significant increase is due to a less strained market environment overall compared to the previous year. On the one hand, market volatility could be taken advantage of from a trading perspective. On the other hand, supply cuts and the resulting high replacement procurement costs had a negative impact on earnings in the past year. All operating business areas contributed to this development with a positive performance. Non-operating EBIT amounted to € 26 million (previous year: € -69 million) and was dominated by reversals of impairment losses in the Storage business area and offsetting impairment losses in the Biogas business area. The **consolidated profit** largely follows EBIT and was significantly up on the previous-year figure and on expectations at € 380 million (previous year: consolidated loss of € -337 million). On account of the Storage, Trading & Sales and Transport business areas in particular, the consolidated profit doubled compared to the forecast. The Storage business area benefited from an increased SWS and lower

energy costs. The Trading & Sales business area benefited from both price volatilities on the market and the high SWS. In the Transport business area, adjusted grid usage fees and lower energy costs led to an improvement in earnings compared to the budgeted figure.

FFO⁵ is above the previous-year figure, in particular due to the significantly higher earnings. As a result of increased investment activities in almost all business areas, both **gross and net investments** were higher than in the previous year. The significant increase in **net financial liabilities** is mainly due to the increase in current liabilities to financing partners and the decrease in cash and cash equivalents in connection with the financing of the operating business.

The increase in profit is accompanied by an increase in group equity. The lower market values for gas purchase and gas sale agreements on the assets and liabilities sides of the balance sheet as of the reporting date also lead to lower total assets. As a result, the **equity ratio** rose to 24 percent (previous year: 13 percent). Thus, VNG has a stable financial position and cash flows in order to continue implementing its strategy.

VNG's individual **performance indicators** changed as follows:

| € million | 2023 | 2022 |
|-----------------------------|--------|--------|
| Billed revenue | 23,196 | 36,237 |
| Adjusted EBIT | 447 | -205 |
| Consolidated profit or loss | 380 | -337 |
| FFO | 486 | -197 |
| Gross investments | 197 | 128 |
| Net investments | 189 | 122 |
| Net financial liabilities | 970 | 7 |
| Equity ratio (%) | 24 | 13 |

380
million euros

is the consolidated net income as at the reporting date 31/12/2023.

⁴ EBIT adjusted for extraordinary and non-recurring effects on income.

⁵ Funds from operations, i.e., consolidated profit or loss adjusted for non-cash expenses and income as well as gains/losses from the disposal of fixed assets.

23.2
billion euros

sales was generated by VNG
in the 2023 financial year.

2. FINANCIAL PERFORMANCE

The volume of **billed revenue**⁶ in the financial year 2023 is around € 23,196 million, which is € 13,041 million lower than in the previous year. Much of revenue still stems from sales of gas and electricity in the Trading & Sales business area. The decrease in billed revenue and billed cost of materials is attributable to a decline in trading volumes.

The IFRIC Agenda Decision on the “Physical Settlement of Contracts to Buy or Sell a Non-financial Item (IFRS 9)” stipulates that purchase and supply contracts measured at fair value through profit and loss be recognised at their current spot price on the date of settlement. That is why the billed revenue and cost of materials are stated in the consolidated statement of comprehensive income. Adjustments are netted against the other operating result. The application of the Agenda Decision merely leads to a change in reporting, and therefore has no impact on the volume of EBIT. Income and expenses from short-term arbitration transactions were netted against each other.

Other operating income (€ 741 million) decreased significantly compared to the previous year (€ 1,289 million). The previous year’s figure included a one-time compensation payment from the federal government in the mid triple-digit million euro range. Income from the valuation of gas contracts decreased by € 58 million to € 644 million.

Personnel expenses (€ 150 million) were up on the previous year (€ 130 million) on account of the increased headcount, particularly in Germany.

Depreciation and amortisation (€ 116 million) decreased by € 19 million in comparison to the previous year. The decrease is due to lower impairment losses than in the previous-year period.

Other operating expenses of € 371 million are down year on year (previous year: € 493 million). This was largely due to the lower expenses of € 236 million relating to the valuation of gas contracts, which were down by € 99 million on the previous year.

The **investment result** (€ 40 million) has improved by € 89 million in comparison to the previous year. The previous year was characterised by a full write-off of the shares in EPG, which were written up again by € 13 million in 2023 as part of the initial full consolidation.

In the previous year, an impairment loss on a loan granted to EPG had a significant negative impact on the **financial result** (€ 26 million, previous year: € -131 million), which was also reversed to a lesser extent in the reporting year. 2023 was also characterised by higher interest income from the reversal of provisions compared to the previous year.

Tax expenses (€ 120 million) comprise ongoing tax expenses of € 18 million and expenses from deferred taxes of € 102 million.

⁵ Prior to the application of the IFRIC Agenda Decision regarding IFRS 9.

3. CASH FLOWS

In line with the development of earnings, **FFO** (€ 486 million) improved in relation to the previous year (€ -197 million). The **changes in working capital** (€ -1,288 million) had a negative impact on net cash flows from operating activities. These are attributable to outflows from margin payments, among other things.

The net cash flows from **investing activities** amount to € -116 million. The spending on investment that this includes, amounting to € 176 million, rose in comparison to the previous year (€ 124 million), and mainly relates to investments in the Transport and Storage business areas. This is counterbalanced by cash inflows of

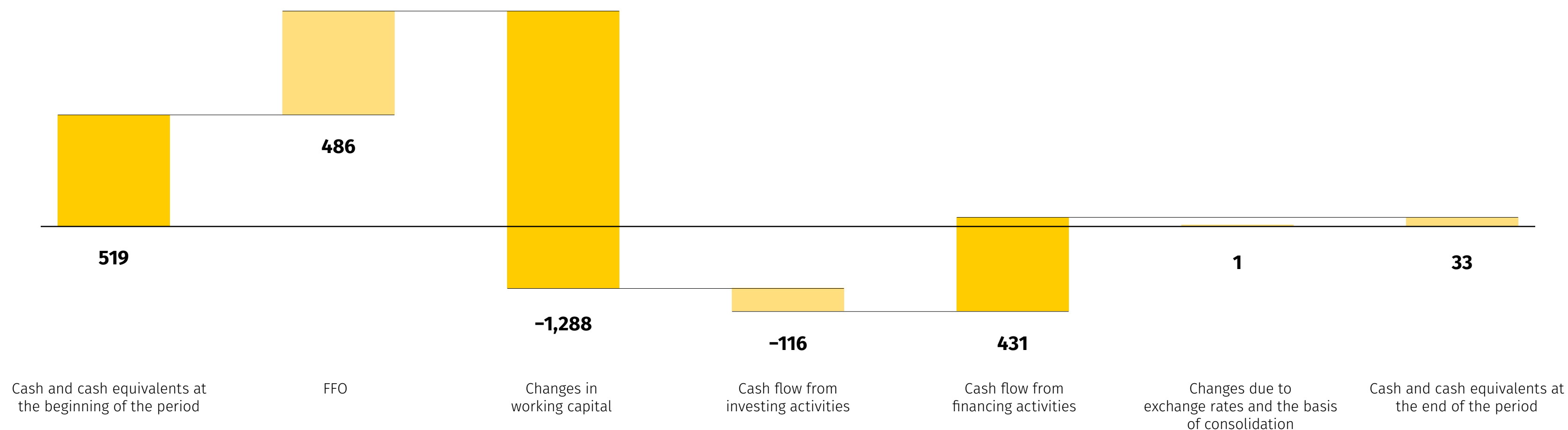
€ 8 million from divestments that are on par with the previous-year level. The reported net cash flows from investing activities includes dividends received (€ 34 million; previous year: € 19 million) and interest received (€ 18 million; previous year: € 7 million).

Financing activities resulted in a net inflow of € 431 million in the financial year (previous year: € 314 million). VNG took our financial liabilities to external financing partners totalling € 481 million (previous year: repayment of € 297 million). In addition, the net cash flows from financing activities were impacted by the repayment of lease liabilities amounting to € 14 million (previous year: € 14 million). Interest payments amounting to € 36 million (previous year: € 41 million) were made.

In the financial year, no dividend was distributed to VNG AG's shareholders for the financial year 2022.

Taking changes due to exchange rates and the basis of consolidation (€ 1 million; previous year: € -9 million) into account, **cash and cash equivalents** decreased from € 519 million to € 33 million. VNG was solvent at all times. Lines of credit amounting to € 1,326 million had not been utilised as at 31 December 2023 (previous year: € 2,207 million). There were also investment obligations amounting to € 79 million as at the reporting date (previous year: € 93 million), most of which are financed internally and by existing credit lines.

Development of cash flows at VNG 2023
in € million



4. FINANCIAL POSITION

VNG's **financial ratios** changed as follows in comparison to the previous year:

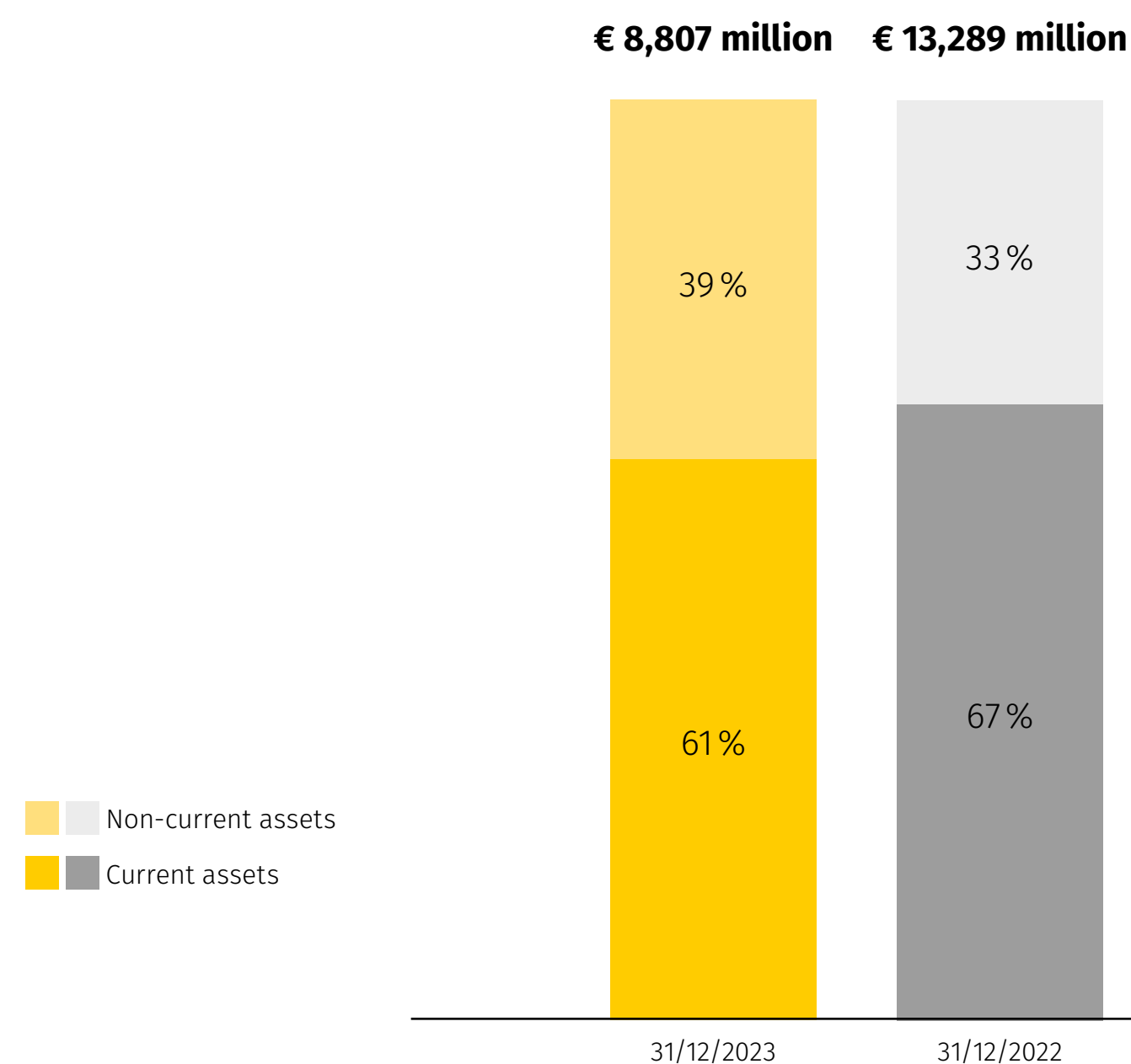
Total assets decreased by € 4,482 million in comparison to 31 December 2022. The decrease in **current and non-current assets** is due on the one hand to current movements on the market that led to lower market values for the gas sale and purchase agreements reported as derivative financial instruments.

On the other hand, in addition to the quantitative reduction in inventories, the price trend also strengthened the decline in inventories reported under current assets.

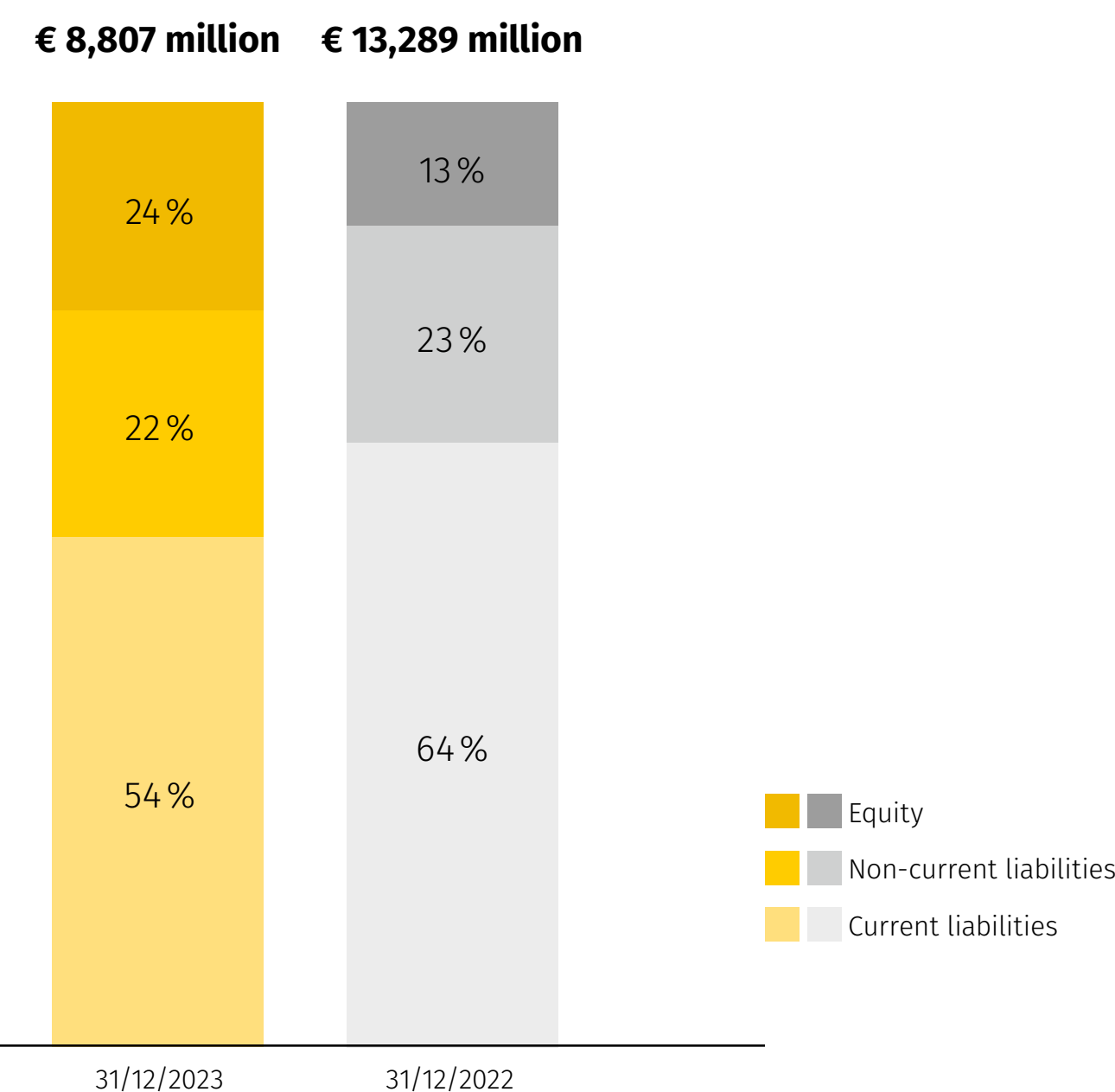
Non-current assets and liabilities also fell significantly compared to the previous year, mainly as a result of lower market values of gas sale and purchase agreements, which is reflected in the change in derivative financial instruments.

At 24 percent, the **equity ratio** is above the previous-year level due to the lower total assets and the improved consolidated profit.

Assets



Equity and liabilities



Opportunities and risk report

1. RISK MANAGEMENT SYSTEM

VNG has an integrated risk management system that integrates all business areas and group entities. This ensures that a balance between opportunities and risks and the Group's capacity to bear risk are constantly maintained, thus assessing VNG's ability to continue as a going concern. The total risk is managed on the basis of having sufficient risk cover in place if a risk occurs. In addition to constantly measuring and monitoring risks, a comprehensive annual risk inventory is carried out in which the risks and opportunities of all group entities that are relevant for VNG are systematically recorded and assessed as deviations from the corresponding forecasts. Significant opportunities and risks are also updated every year. In addition to the regular risk assessment methods, an ad hoc risk reporting system based on defined thresholds is in place that identifies significant deviations from plans at an early stage and in so doing promptly highlights changes in the opportunity/risk portfolio. The effectiveness of the risk management system is checked regularly by the internal audit function.

2. OPERATING OPPORTUNITIES AND RISKS

VNG has put itself on a broad footing with its core business areas relating to natural gas as a product, and is also exploiting new potential unrelated to natural gas as part of its "VNG 2030+" strategy, including through acquisitions. This positioning diversifies the Group's risks, and also allows it to take advantage of opportunities in an extremely dynamic market. Based on the forecast results, the risk/reward profile for 2024 is balanced.

The main opportunities and risks are driven by market prices. This largely pertains to the price fluctuations on the commodity markets in the area of trading and future spread developments in the area of storage. Further significant opportunities and risks stem from the regulatory environment. Apart from the general risks of business, there are currently no apparent risks with the potential to lastingly and significantly impact VNG's financial position, performance and cash flows.

Transport business area: As before, the economic performance of ONTRAS primarily depends on the regulatory framework and the permissible revenue cap

associated with it. The Federal Network Agency sets the equity interest rate for existing and new facilities in each regulation period based on historical rates. This is why the interest rate increase on the money and capital markets since the end of 2021 has only been reflected in the regulatory revenue cap with a significant time delay.

ONTRAS also takes advantage of opportunities to provide services in the non-regulated energy infrastructure sector. With respect to the energy policy challenge of a CO₂-neutral future for energy, there is also an opportunity for the continued use of Germany's gas infrastructure as part of a gradual transition from natural gas to renewable gases. ONTRAS' current activities to establish a hydrogen starter network for Eastern Germany, as part of the Germany-wide hydrogen core network, represent an important step in this direction.

The coupling of the electricity, heating market, mobility and industrial sectors makes it possible to develop an economically viable and cost-effective solution that involves the gas infrastructure. As a result, ONTRAS is actively working on the transformation towards a climate-neutral gas supply by 2045. As part of this, ONTRAS is constantly carrying out necessary renovation and

modernisation work on its technical facilities in order to ensure that the network is reliable, and in so doing safeguard the contractually agreed supply of gas to downstream networks and end consumers. The transmission network and its corresponding facilities were once again technically secure and available at all times in the financial year 2023. As before, the risks for 2024 are mainly limited to the operation of technical facilities.

Storage business area: The volatile market price trend and the changing regulatory environment continue to present significant opportunities and risks for the future marketing of storage capacities and the resulting revenue that can be generated.

The intensity of competition with other flexibility products means that the proportion of storage bookings at short notice remains high. The loss of the majority of Russian supply contracts in Europe, which in the past were key sources of flexibility, continues to increase the value of natural gas storage facilities. On the other hand, increasing LNG capacities are slowing down this development. In addition, the fill level requirements resulting from the German Gas Storage Act [Gasspeichergesetz] lower the scope for action in the management of storage and thus also opportunities in marketing. Opportunities and risks arising from the redemption of the shares in EPG were already factored into the risk inventory during the most recent regular risk inventory.

Substantial demand for storage capacity is also anticipated due to the challenge of creating a carbon-neutral future for energy. Under certain circumstances, the existing infrastructure may also be used to store renewable energy in the form of green gases. This is to be investigated and tested with project partners for green hydrogen as a fuel as part of the Bad Lauchstädt Energy Park regulatory sandbox.


The volatility of market prices creates uncertainty for the future marketing of storage capacity and the revenue that can be generated from it. Opportunities relate in particular to further increases in marketing prices. VGS also aims to tackle the competition with innovative products, targeted investment decisions, the decommissioning of inefficient and unprofitable storage facilities such as those in Buchholz and Kirchheilingen, and measures to improve efficiency and promote automation. In response to the current demand situation, cost structures have already been optimised and the organisation has been set up in a manner that conforms with the market. Ongoing maintenance and the monitoring of underground gas storage facilities on the basis of technical regulations and internal provisions, and regular assessment of the condition of all surface and underground facilities, ensure that high standards of safety are maintained from a technical perspective and in accordance with mining law. High standards of quality are also ensured by annual training plans for the

ongoing qualification of VGS employees and service providers, as well as regular internal and external audits.

Trading & Sales business area: VNG H&V's trading activities present opportunities and risks relating to price fluctuations on the commodity markets in particular. A key risk factor is the high volatility of prices on the wholesale market. Price differences between the European gas trading centres and between seasonal forward products also entail opportunities and risks. Trading performance can also be significantly affected by temperatures, particularly in the winter period. The positions in purchase and sale agreements are combined to form an overall portfolio, and constantly monitored and managed. In addition to the portfolio's natural hedging effects, specific hedging strategies are used to limit the effects of negative changes in earnings that take the relevant risk factors into consideration and may also include derivative financial instruments. Trading activities are carried out in accordance with specific risk and loss limits for the operating business. Based on the forecast results, risks will slightly outweigh opportunities in 2024. The maximum total deviation in earnings as a result of the risk factors already mentioned is in the high double-digit million euro range.



More information

about our business areas can be found on our [website](#) 

VNG H&V has a structurally diversified procurement portfolio that is aligned with the market. The existing contracts mainly serve to cover the sales position. The majority of procurement contracts continue to be concluded via exchanges. This is accompanied by significantly different capital requirements and also reduces credit risks. With respect to unit sales, VNG H&V is constantly developing new products and exploiting additional sales channels in the traditional wholesale business. VNG H&V also takes the opportunities presented by the market, and by spot and futures trading to optimise its overall portfolio.

Significant credit risks result from natural gas supply and trading contracts with German and international business partners as well as from agreed financial instruments to hedge currency and commodity price risk positions. With the recent steady decline in market prices, the assessment of the financial impact of potential repurchasing and default risks has fallen. The credit ratings of business partners (customers, suppliers, trading partners and financial institutions) are evaluated and continuously monitored on the basis of the information available as well as procedures that are customary for the market as part of the Group's established credit risk management system. The usual hedging instruments (including guarantees or upfront payments) are used to manage credit risks. The customer portfolio is also largely covered against default by loan default insurance.

VNG is subject to energy and financial market regulation. Suitable IT systems have been installed in order to meet the requirements of MiFID II (Markets in Financial Instruments Directive), MAR (Market Abuse Regulation) and REMIT (Regulation on Energy Market Integrity and Transparency).

The end consumer supplier goldgas operates in a challenging competitive environment with low margins and the continued effects of higher procurement costs. If there are price adjustment measures or market prices remain low, this could have a negative impact on the customer base and unit sales. goldgas also sees opportunities in connection with new distribution channels, the ongoing optimisation of processes and services relating to the energy sector.

Biogas business area: This area's risk profile is influenced, among other things, by the decentralised nature of the investment portfolio. Regional, weather-related risks are managed centrally by the substrate management function. The strong growth of BALANCE and parallel development of the portfolio continue to place significant demands on the organisation. The Biogas business area is also subject to increasing regulatory requirements (including the EEG and RED), which are linked to both risks and opportunities. Risks are currently arising due to regulatory changes in connection with a new certification standard for calculating greenhouse gas reduction quotas. Opportunities may stem from the potential role of biogas as part of the energy transition, and the associated goal of decarbonisation.

Digital Infrastructure business area: The expansion of the fibre optic network in Germany is determined by increasing competition for appealing expansion regions and customer as a result of the growing public interest, political activities and steadily rising demand. The biggest opportunities and risks in the FTTX area therefore lie in the acquisition of attractive regions, the timely finishing of projects – in particular in view of the shortage of skilled labour and the limited availability of materials – and the future price development. There are also opportunities in the marketing of reserves in the FTTX networks as dark fibre⁶ to third parties and internet-related services with existing customers.

Fibre optic services include the project business in addition to long-term and regularly recurring service and maintenance agreements. In addition to general risks such as adherence to fulfilment and performance obligations and IT security, the project business in particular, depending on the company and business activity, is subject to the economic situation in the telecommunications and energy supply sector and is therefore dependent on developments in the individual sectors and in the economy as a whole. Increasing digitalisation, which is also particularly relevant for energy suppliers with regard to the energy transition and new energy networks, is a key opportunity for the area of fibre optic services, in addition to the expansion of the fibre optic network. Future developments therefore hinge on winning new projects and additional customers.

⁶ Dark fibre refers to unused fibre-optic cables.

3. OVERALL ASSESSMENT OF THE RISK SITUATION

The overall risk situation is assessed on the basis of a risk-bearing capacity concept and a deviation analysis of key performance indicators. Risk-bearing capacity describes a company's ability to financially cope with risks that occur, and therefore to avoid developments that threaten its ability to continue as a going concern. This can therefore be described as adequate if it has sufficient potential to cover risks if they occur. Risk cover potential includes capital to cover risks to earnings, which is defined as balance sheet equity, and capital to cover risks to liquidity, which is defined as the available financial framework. The potential loss in terms of profit (99 percent worst case) and the potential impact on liquidity (99 percent worst case) are calculated for the medium-term planning horizon using a Monte Carlo simulation, and juxtaposed with the risk cover capital. Based on this analysis of risk-bearing capacity, VNG's overall risk situation is not thought to pose a risk to its ability to continue as a going concern.

Opportunities and risks may also influence VNG's key performance indicators. The figure below shows the effects on adjusted EBIT for the financial year 2024 (figures stated in millions of euros), which are largely

attributable to the continued volatile market prices. Based on a deviation analysis of the key performance indicators, the overall level of risk is considered to be appropriate.

VNG is continuing to monitor the continuing political and economic developments extremely closely and is developing measures in order to minimise the negative effects from these developments. However, on account of the fluid situation, assumptions could change at any time. On the whole, there are currently no going concern risks within these considerations, taking the risks into account on both a gross as well as a net basis.

4. COMPLIANCE MANAGEMENT SYSTEM

VNG has a Group-wide compliance management system (CMS) that is aimed at ensuring that all employees act in accordance with the law and with integrity in order to avoid jeopardising the confidence of customers, business partners, shareholders and the general public. It includes all the core elements of an appropriate and effective CMS. An external review of the appropriateness of the CMS was initiated in the reporting year and will be continued in 2024.

As an extension of the existing CMS, VNG implemented a Tax CMS for income tax, VAT and excise tax for German subsidiaries whose accounting is handled by VNG AG. It serves to identify risks of significant breaches of tax regulations in the company in good time and to prevent them using targeted measures. An audit firm assessed and certified the adequacy and effectiveness of the Tax CMS for income tax and VAT in 2021 and the adequacy and effectiveness of the system for excise tax (energy and electricity tax) in 2023. In addition, the Tax CMS for income tax and VAT was subject to an audit by the internal audit function in the reporting year.

5. FINANCIAL RISK MANAGEMENT

VNG is above all exposed to risks relating to changes in commodity prices, exchange rates and interest rates, as well as credit risks. The Group's fundamentally conservative approach is reflected in its systematic financial risk management. Front-office and back-office functions, and financial risk management are kept organisationally separate from each other.

The derivative standard financial instruments used for financial risk management are only used to hedge the existing risks associated with the underlying transactions. Futures are used by the trading companies to manage price risks associated with gas purchase and gas sale agreements as well as for own-account trading. VNG uses statistical risk parameters to measure and monitor these risks every day, and limits the potential changes in the present value of the trading portfolio. All of the Group's currency exposures are concentrated with the parent company and hedged in full, if possible. Contracts with group entities based outside the euro zone are only ever concluded in the domestic currencies of those entities. Forward exchange transactions and natural portfolio hedging effects are primarily considered as hedging instruments. VNG practices active interest risk management involving the regular evaluation of all

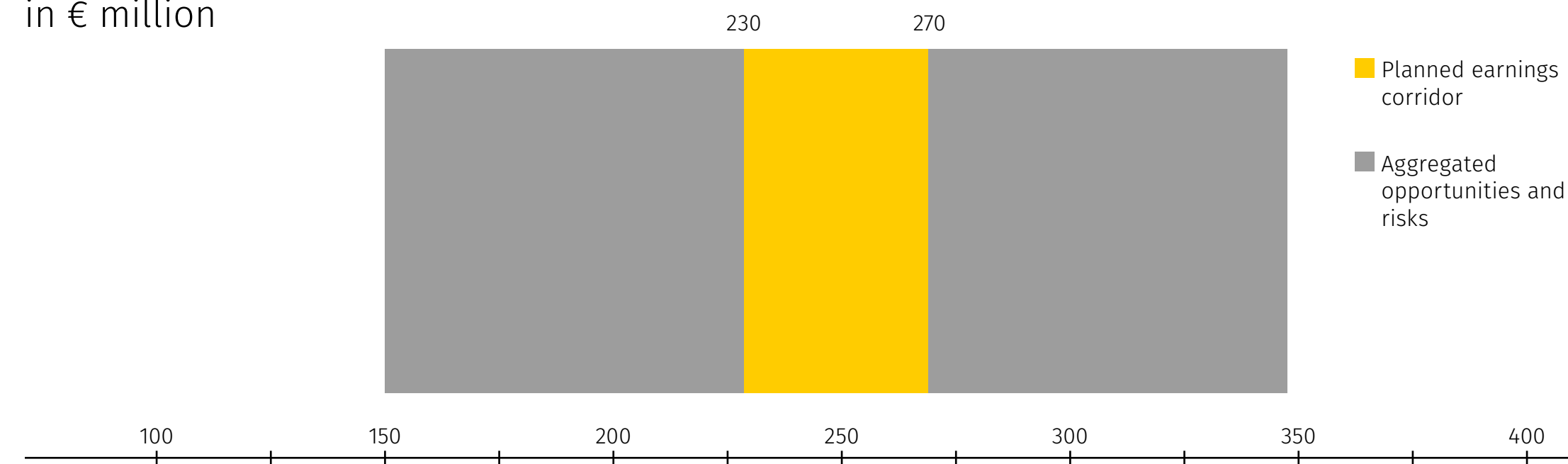
interest rate risks, which are also managed using derivative financial instruments. Solvency is guaranteed at all times by maintaining sufficient reserves of cash and cash equivalents in the form of guaranteed lines of credit, and also by optimising the allocation of liquidity within the Group. The rolling liquidity planning over periods of several years regularly determines the peak financing requirements in future. As at the reporting date, these were always covered by sufficient sources of financing, even in the risk scenarios.



Outlook

The financial year 2023 was characterised by an extraordinary market situation in which VNG succeeded in generating comparatively high levels of income. The volatile market environment was exploited to generate profit, particularly in the Trading & Sales and Storage business areas, while significantly falling energy prices supported the cost side. For this reason, adjusted EBIT in 2023 is at an extraordinarily high level and is more than twice as high as originally planned. Although non-repeatable effects and a further calming of the market mean that significantly lower earnings are expected in 2024, this will also be well above the level prior to 2022. VNG is planning to achieve adjusted EBIT of between € 230 million and € 270 million in 2024, as well as consolidated profit of between € 175 million and € 200 million. For the Transport business area, 2024 is expected to see a high level of earnings, but still lower than in 2023 on account of an extraordinary regulatory effect in 2023. In the Storage business area, the summer-winter spreads, which are currently falling to a lower level again for the storage year 2024 / 25, will lead to significantly lower earnings. The Trading & Sales business was able to take advantage of the market upheaval in the past reporting year. As the market is expected to calm down, a high but still lower contribution to earnings

Adjusted EBIT 2024
in € million



is anticipated, similar to the Storage business area. One focus for trading will also be on developing new sources of supply and diversifying with new business cases. The end consumer business is still an important source of income in the German, Polish, Austrian and Italian target markets. Inorganic growth in the Biogas business area has stagnated over the past two years due to the crisis. Further organic growth is planned, but this will not yet be reflected in earnings for 2024. The past year was also characterised by positive non-recurring effects in the Biogas business area, which is why the adjusted EBIT planned for the coming year will be slightly lower. The Digital Infrastructure business area performed particularly well. In 2024, earnings are expected to return to the level seen in the previous year.

Net financial debt is anticipated to be significantly lower in 2024 due to the company's balanced own internal financing capability and a reduction in working capital tied up. However, as in the past, changes in working capital in the trading business and its measurement as at the reporting date may be subject to severe fluctuation, and therefore also have a significant impact on not only net debt, but also total assets and the Group's equity ratio. Gross and net investments are expected to be slightly higher in 2024 than in the reporting year. FFO was characterised by the excellent level of earnings in 2023. In 2024, FFO is expected to be significantly lower, but above the level prior to 2022, in line with EBIT development. All in all, VNG considers itself to be in a very good position for the financial year 2024.

CONSOLIDATED FINANCIAL STATEMENTS

66 Consolidated statement of profit or loss

67 Consolidated balance sheet

68 Other disclosures

68 Composition of VNG AG's Executive Board

68 Composition of VNG AG's Supervisory Board

69 Consolidated companies

69 Fully Consolidated Companies

70 Independent auditor's report



Consolidated statement of profit or loss

FROM 1 JANUARY TO 31 DECEMBER 2023

| Consolidated statement of profit or loss for the period from 1 January to 31 December 2023 | 1/1 to 31/12/2023 | 1/1 to 31/12/2022 |
|--|-------------------|-------------------|
| | € million | € million |
| Billed revenue | 23,196.0 | 36,237.1 |
| Restatement due to IFRIC Agenda Decision on IFRS 9 | -6,726.0 | 32,547.8 |
| Revenue pursuant to IFRS | 16,470.0 | 68,784.9 |
| Changes in inventories | 4.1 | 2.5 |
| Other own work capitalised | 7.2 | 6.1 |
| Other operating income | 741.0 | 1,289.0 |
| Cost of materials billed | -22,906.1 | -37,267.2 |
| Restatement due to IFRIC Agenda Decision on IFRS 9 | 6,753.8 | -32,281.4 |
| Cost of materials pursuant to IFRS | -16,152.3 | -69,548.6 |
| Personnel expenses | -149.6 | -130.2 |
| Depreciation and amortisation | -115.8 | -134.8 |
| Other operating expenses | -370.7 | -493.2 |
| Investment result | 39.6 | -49.3 |
| Financial result | 25.5 | -130.7 |
| Income taxes | -119.5 | 67.3 |
| Consolidated profit or loss | 379.5 | -337.0 |
| Withdrawal from the capital reserves | 0.0 | 541.9 |
| Transfer to retained earnings | 0.0 | -204.9 |
| Consolidated net retained profit | 379.5 | 0.0 |

Consolidated balance sheet

AS AT 31 DECEMBER 2023

| Consolidated balance sheet as at 31 December 2023 | 31/12/2023 | 31/12/2022 |
|---|----------------|------------|
| | € million | € million |
| Assets | 8,807.0 | 13,289.1 |
| Non-current assets | 3,441.8 | 4,373.2 |
| Intangible assets | 32.3 | 14.9 |
| Property, plant and equipment | 2,016.4 | 1,928.1 |
| Entities accounted for using the equity method and other financial assets | 283.4 | 251.2 |
| Derivative financial instruments | 1,094.3 | 2,164.3 |
| Other non-current assets | 7.7 | 2.3 |
| Deferred taxes | 7.7 | 12.4 |
| Current assets | 5,365.2 | 8,915.9 |
| Inventories | 516.1 | 1,080.3 |
| Financial assets | 11.2 | 200.7 |
| Trade receivables | 680.2 | 1,120.3 |
| Derivative financial instruments | 3,718.7 | 5,201.8 |
| Other current assets | 406.5 | 993.7 |
| Cash and cash equivalents | 32.5 | 319.1 |

| Consolidated balance sheet as at 31 December 2023 | 31/12/2023 | 31/12/2022 |
|---|----------------|------------|
| | € million | € million |
| Equity and liabilities | 8,807.0 | 13,289.1 |
| Equity | 2,140.8 | 1,759.4 |
| Issued capital | 452.7 | 452.7 |
| Retained earnings | 1,301.9 | 1,301.9 |
| Consolidated net retained profit | 379.5 | 0.0 |
| Cumulative changes in other comprehensive income | 6.7 | 4.8 |
| Non-current liabilities | 1,946.3 | 3,040.6 |
| Provisions | 365.2 | 357.7 |
| Deferred taxes | 96.9 | 1.2 |
| Financial liabilities | 500.1 | 508.9 |
| Trade payables | 0.9 | 0.4 |
| Derivative financial instruments | 970.1 | 2,159.2 |
| Other liabilities and subsidies | 13.1 | 13.2 |
| Current liabilities | 4,719.9 | 8,489.1 |
| Provisions | 73.1 | 98.8 |
| Financial liabilities | 503.9 | 20.6 |
| Trade payables | 731.5 | 1,728.5 |
| Derivative financial instruments | 3,264.1 | 6,283.8 |
| Other liabilities and subsidies | 147.3 | 357.4 |

Other disclosures

COMPOSITION OF VNG AG'S EXECUTIVE BOARD

| | |
|--------------------------|---|
| Ulf Heitmüller | Chairman of the Executive Board |
| Hans-Joachim Polk | Member of the Executive Board, Infrastructure & Technical Affairs |
| Bodo Rodestock | Member of the Executive Board, Finance, Human Resources and IT |

COMPOSITION OF VNG AG'S SUPERVISORY BOARD

| | | | |
|----------------------------|---|--|--|
| Dirk Güsewell | Chairperson Member of the Board of Management for System Critical Infrastructure at EnBW Energie Baden-Württemberg AG | Prof. Dr. Martin Fleckenstein | Independent consultant |
| Dr. Frank Brinkmann | 1st Vice-Chairman Chairman of the Board of SachsenEnergie AG | Hans-Peter Floren | Entrepreneur |
| Christina Ledong | 2nd Vice-Chairman Chairman of the joint works council of VNG AG, ONTRAS Gastransport GmbH, VNG Gasspeicher GmbH and VNG Handel & Vertrieb GmbH | Monty Heßler | Unified Communications System Specialist of GDMcom GmbH |
| Markus Baumgärtner | Head of value chain natural gas of EnBW Energie Baden-Württemberg AG | Peter Heydecker | Head of Trading of EnBW Energie Baden-Württemberg AG |
| Tobias Dittrich | Senior Business Expert Asset-Management of VNG Handel & Vertrieb GmbH | Prof. Dr.-Ing. habil. Antonio Hurtado | Head of the Institute for Energy Technology at the Technische Universität Dresden |
| Sascha Enderle | Head of Digital Finance & Transformation of EnBW Energie Baden-Württemberg AG | Hartmut Kremling | Consulting engineer |
| Barbara Endriss | Managing Director of OEW Energie-Beteiligungs GmbH | Karsten Rogall | Managing Director of Stadtwerke Leipzig GmbH |
| Christina Fenin | Key person for technical cooperations of VNG Gasspeicher GmbH | Gunda Röstel | Managing Director of Stadtentwässerung Dresden GmbH |
| | | Katja Schmied | Order and Project Accounting Officer of ONTRAS Gastransport GmbH |
| | | Dr. Benno Seebach | Head of Capacity Planning of ONTRAS Gastransport GmbH |
| | | Liv Monica Stubholt | Partner at Selmer AS |
| | | Sebastian Thamm | Specialist M&A Wholesale at VNG AG |
| | | Dr. Bernd-Michael Zinow | Head of law, audit, compliance & regulation functional unit of EnBW Energie Baden-Württemberg AG |

Consolidated companies

FULLY CONSOLIDATED COMPANIES¹

Overview of the fully consolidated companies:

| Shareholding % | Name and registered offices of the entity |
|--|---|
| Business area | |
| 100.00 | ONTRAS Gastransport GmbH, Leipzig |
| Business area Storage | |
| 100.00 | Erdgasspeicher Peissen GmbH, Halle (Saale) (from 31 October 2023) |
| 100.00 | VNG Gasspeicher GmbH, Leipzig |
| 100.00 | VNG Gasspeicher Service GmbH, Leipzig |
| Business area Trading & Sales | |
| Trading segment | |
| 100.00 | ENERGIEUNION GmbH, Schwerin |
| 100.00 | VNG Handel & Vertrieb GmbH, Leipzig |
| Domestic sales segment | |
| 100.00 | goldgas GmbH, Eschborn |
| Foreign sales segment | |
| 100.00 | G.EN Gaz Energia Sp. z o.o., Warsaw, Poland |
| 100.00 | G.EN. Operator Sp. z o.o., Tarnowo Podgórne, Poland |
| 100.00 | goldgas GmbH, Vienna, Austria |
| 100.00 | HANDEN Sp. z o.o., Warsaw, Poland |
| 100.00 | VNG Austria GmbH, Gleisdorf, Austria |
| 100.00 | VNG Energie Czech s.r.o., Prague, Czech Republic |

¹ A total of 20 (previous year: 18) companies were included as fully consolidated companies in VNG's consolidated financial statements.

² Gas-Union GmbH holds treasury shares of 1.85 percent.

| Shareholding % | Name and registered offices of the entity |
|---|--|
| Business area Biogas | |
| 100.00 | BALANCE Erneuerbare Energien GmbH, Leipzig |
| 100.00 | Biogas Produktion Altmark GmbH, Leipzig |
| Business area Group Centre | |
| 100.00 | VNG AG, Leipzig |
| 100.00 | VNG-Erdgascommerz GmbH, Leipzig |
| Business area Digital Infrastructure | |
| 100.00 | Gas-Union GmbH, Frankfurt am Main ² |
| 100.00 | GDMcom GmbH, Leipzig |
| 100.00 | GEOMAGIC GmbH, Leipzig |

Independent auditor's report

To VNG AG

OPINIONS

We have audited the consolidated financial statements of VNG AG, Leipzig, and its subsidiaries (the Group), which comprise the consolidated balance sheet as at 31 December 2023, the consolidated statement of profit or loss, the consolidated statement of comprehensive income, the consolidated statement of cash flows and the consolidated statement of changes in equity for the financial year from 1 January to 31 December 2023, and the notes to the consolidated financial statements, including a summary of significant accounting policies. In addition, we have audited the group management report of VNG AG for the financial year from 1 January to 31 December 2023.

In our opinion, on the basis of the knowledge obtained in the audit,

- ▶ the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Section 315e (1) of the German Commercial Code [Handelsgesetzbuch, HGB] and, in compliance with these requirements, give a true and fair view of the financial position and cash flows of the Group as at 31 December 2023 and of its financial performance for the financial year from 1 January to 31 December 2023, and
- ▶ the accompanying group management report as a whole provides an appropriate view of the Group's position. In all material respects, this group management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development.

Pursuant to Section 322 (3) Sentence 1 of the HGB, we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements and of the group management report.

BASIS FOR THE OPINIONS

We conducted our audit of the consolidated financial statements and of the group management report in accordance with Section 317 of the HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements and of the group management report" section of our auditor's report. We are independent of the group entities in accordance with the requirements of German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the group management report.

RESPONSIBILITIES OF THE EXECUTIVE DIRECTORS AND THE SUPERVISORY BOARD FOR THE CONSOLIDATED FINANCIAL STATEMENTS AND THE GROUP MANAGEMENT REPORT

The executive directors are responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) of the HGB, and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the financial position, performance and cash flows of the Group. In addition, the executive directors are responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud (i.e., fraudulent financial reporting and misappropriation of assets) or error.

In preparing the consolidated financial statements, the executive directors are responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, the executive directors are responsible for the preparation of the group management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements, and appropriately presents the opportunities and risks of future development. In addition, the executive directors are responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a group management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the group management report.

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the group management report.

AUDITOR'S RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS AND OF THE GROUP MANAGEMENT REPORT

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the group management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the group management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Section 317 of the HGB and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this group management report.

We exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- ▶ Identify and assess the risks of material misstatement of the consolidated financial statements and of the group management report, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than the risk of not detecting a material misstatement resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- ▶ Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the group management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.
- ▶ Evaluate the appropriateness of accounting policies used by the executive directors and the reasonableness of estimates made by the executive directors and related disclosures.
- ▶ Conclude on the appropriateness of the executive directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the group management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.
- ▶ Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the financial position, performance and cash flows of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e (1) of the HGB.
- ▶ Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the group management report. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinions.
- ▶ Evaluate the consistency of the group management report with the consolidated financial statements, its conformity with [German] law, and the view of the Group's position it provides.

► Perform audit procedures on the prospective information presented by the executive directors in the group management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by the executive directors as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Leipzig, 8 March 2024

EY GmbH & Co. KG
Wirtschaftsprüfungsgesellschaft

| | |
|-------------------------|-------------------------|
| Bätz | Salzer |
| Wirtschaftsprüfer | Wirtschaftsprüfer |
| [German Public Auditor] | [German Public Auditor] |

SERVICE

75 Glossary

77 Publication Details

Glossary

| | |
|--|---|
| Biogas | Gas produced during the fermentation of biomass. It can be used in CHP plants for local electricity generation or reconditioned to natural gas quality. The resulting biomethane can then be fed into the natural gas network. |
| Biomethane, also known as bio natural gas | Renewable biogas with a high methane content suitable for feeding into the natural gas grid. |
| Blue hydrogen | Hydrogen, the production of which from methane releases no CO ₂ into the atmosphere. The CO ₂ emitted during the reforming of conventional natural gas can be captured and stored in geological structures (called CO ₂ storage) or used to produce synthetic methane. |
| CCUS, Carbon Capture Use and Storage: | Describes technologies and processes that involve the capture, transport and permanent storage of CO ₂ or its further processing in industrial products such as carbon-based fuels, carbonated water or chemicals. |
| Cracker | An ammonia cracker is a system that is used to produce hydrogen. The process is based on the thermal decomposition of ammonia (NH ₃) to hydrogen (H ₂) and nitrogen (N ₂). Ammonia crackers play an important role in the hydrogen economy as they offer an efficient and sustainable method of producing hydrogen. |
| Steam reforming | Steam reforming is a cost- and energy-efficient process for the production of hydrogen from fossil energy sources, such as natural gas, benzine, methanol, biogas or biomass, with the addition of steam. |
| Decarbonisation | Decarbonisation is the reduction of carbon dioxide emissions through the use of low-carbon energy sources (including renewable energies), which results in lower emissions of greenhouse gases into the atmosphere. |
| Decarbonised gases | The term “decarbonised and renewable gases” refers to all energy sources that are available in gaseous form or in liquefied form from gases that no longer contain carbon and/or were obtained from renewable energies. They make a significant contribution to the fulfilment of climate targets. |
| Decarbonised hydrogen | Blue hydrogen is low in emissions and is therefore also referred to as “decarbonised hydrogen”. The CO ₂ released during production is captured and stored or directly processed industrially. |
| Electrolysis | “Electrolysis” refers to the splitting of a chemical compound through the use of an electric current. Electrolysis therefore separates the substances contained in the compound. |
| Electrolyser | The electrolyser is one of the essential hydrogen technologies in a hydrogen economy. It is used to split water into its components hydrogen and oxygen. Electrolysis is therefore the reverse reaction of the fuel cell. |
| Rated thermal output | The rated thermal output is the maximum fuel energy that can be supplied simultaneously to a combustion unit, based on the lower calorific value. The type of fuel used is irrelevant. |
| FTTX projects | FTTX stands for “Fibre to the X” and describes the expansion depth of fibre optic networks. Designations such as FTTB, FTTC or FTTH give an indication of how the fibre optic line is extended over the last mile, e.g. to the pavement or directly into the home. |
| Glass fibre backbone | Backbones are the high-performance core networks on which the internet is based. These base networks connect the individual sub-networks of the regions and enable global data exchange. |
| Grey hydrogen | Hydrogen obtained from natural gas by steam reforming, during the production of which CO ₂ is emitted into the atmosphere. |
| Green hydrogen | Climate-neutral gas produced using power-to-gas or electrolysis processes. During production, water is split into hydrogen and oxygen using electrical energy. The hydrogen produced in this way is designated as “green” provided that a certain proportion of the electricity used is generated from renewable energy. |

Glossary

| | | | |
|---------------------------------|---|---|---|
| IPCEI (project proposal) | IPCEI stands for “Important Project of Common European Interest”. These are important projects of common European interest that receive state funding and thus make an important contribution to the growth, employment and competitiveness of European industry and the economy. | Intersectoral energy integration | Networking of the energy and industrial sectors of electricity, district heating and transport in connection with the energy transition. |
| Cavern storage | Cavern storage facilities are large, artificially created cavities in massive underground salt formations, such as salt domes. The physical properties of the salt formations mean that the caverns are naturally sealed as the surrounding salt forms a gas-impermeable barrier. In addition to natural gas, hydrogen can also be stored here. | Summer-winter spreads | Seasonal difference between summer and winter prices for natural gas. |
| LNG, Liquid Natural Gas | Liquefied natural gas that can be used as a fuel, e.g. in shipping and for truck transport. | Spot and futures markets | The spot market is the market of international commodity exchanges where transactions are carried out against immediate payment and immediate delivery. Futures contracts are traded on a futures market that will only be fulfilled in the future. |
| LTI | Lost-time incident, accident at work resulting in lost time | Synthetic methane | Synthetic methane is produced using the power-to-gas process. After hydrogen has been produced by electrolysis, it is converted into synthetic methane by methanation with the addition of carbon dioxide. |
| Open-season procedure | An open-season procedure is a process in the energy sector to regulate and optimise the demand for transport capacity in pipelines or storage capacity in storage infrastructure. During this process, companies or organisations announce their interest in using this capacity. | | |
| Power-to-gas | Innovative technology in which gas is produced using electricity through water electrolysis and, if necessary, downstream methanisation. | | |

Publication details

► Publisher

VNG AG
Braunstraße 7
04347 Leipzig

► Coordination and editorial responsibility

VNG AG
Kommunikation / Politik
Leipzig

► Contact

Phone +49 341 443-0
info@vng.de
www.vng.de/en

► Copy deadline

11 April 2024

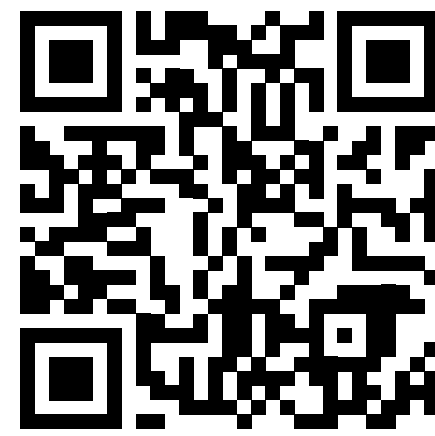
► Concept, design and layout

IR-ONE AG & Co., Hamburg
www.ir-one.de

► Photos

P. 1, 4, 5, 6, 12, 13, 14, 15, 18, 27, 28, 29, 30, 31, 32, 34, 35, 38, 65, 74:
Torsten Proß, Jeibmann Fotografik
P. 8, 17: Tom Schulze
P. 9: EnBW/Catrin Moritz
P. 22, 37: VNG AG
P. 23: Rico Thumser
P. 24, 35: Anika Dollmeyer
P. 26: Shutterstock 1755309998
P. 33: Adobe 20927031
P. 36: Alice End Mediendesign
P. 76: Dirk Brzoska





VNG AG

Braunstraße 7 | 04347 Leipzig

PO Box 24 12 63 | 04332 Leipzig

Phone +49 341 443-0 | Fax +49 341 443-1500

info@vng.de | www.vng.de/en