

# SUSTAINABILITY REPORT 2024



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# 1 STATEMENT BY THE MANAGEMENT BOARD

GRI 2-22

Another eventful year lies behind us – for GASCADE and the entire energy industry. The transformation into a climate-neutral economy presents companies with major challenges that offer enormous opportunities as well. We see this challenge of the century as a dual responsibility: on the one hand, we are working hard to make our gas transport more sustainable and lower our emissions. On the other hand, we are actively accelerating the decarbonization of the economy by developing an infrastructure for green gases.

The approval of the hydrogen core network in Germany by the Federal Network Agency was a significant milestone. This reliable framework creates a clear path forward for hydrogen pipelines on land and at sea. Around 22 percent of the German core network will be implemented by GASCADE.

Through the 'Flow – Making Hydrogen Happen' program, our goal is to enable the transport of substantial hydrogen volumes starting in 2026. Furthermore, we are demonstrating that the conversion from natural gas to hydrogen in the existing network is technically feasible and efficient. Without the right infrastructure, a carbon-free energy future remains unattainable.

Another success in 2024 is the significant reduction in our own emissions, proving that gas transport can be achieved with low emissions – even when external provisions limit our scope for action.

In 2024, we have refined our corporate strategy in a targeted manner and set new priorities. Sustainability is now a common thread running through all our strategic considerations. For GASCADE, sustainability means more than just ecological responsibility – it encompasses social engagement and digital innovation as well. We are providing targeted impetus in the areas of diversity, employee well-being, and social responsibility. With the 'Volunteering at GASCADE' program, we support social institutions in Kassel and promote volunteer work.

The sustainable transformation of the energy market and the ramp-up of hydrogen pose challenges – but our efforts are worthwhile. By electrifying compressor units, using renewable energies, and creating a future-oriented infrastructure, we are shaping a carbon-free energy future. Through determination and innovative strength, we are leading the way in driving meaningful change.

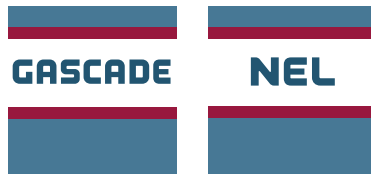


Dr. Christoph von dem Bussche  
Managing Director GASCADE and  
NEL Gastransport

Ulrich Benterbusch  
Managing Director GASCADE and  
NEL Gastransport



## 2 THE TRANSPORT COMPANIES



### 2.1 Details on Sustainability Report and Organization

GRI 2-1, 2-2, 2-3, 2-4, 2-5, 2-6, 2-14

This Sustainability Report was prepared for the following companies:

- GASCADE Gastransport GmbH  
(hereinafter GASCADE),
- NEL Gastransport GmbH  
(hereinafter referred to as NGT).

All of the companies are headquartered in Kassel. Business activities are conducted exclusively in Germany. The shareholder of GASCADE and NGT is W & G Transport Holding GmbH (WGTH). WGTH is a subsidiary of WIGA Transport Beteiligungs GmbH & Co. KG and has been wholly owned by SEFE Securing Energy for Europe GmbH, Berlin, since 2024. GASCADE not only operates and manages its own gas network but also acts as a service provider in this function for other pipelines (in particular EU-GAL, NEL, OPAL) that are jointly owned by several German transmission system operators (TSO). In reporting aspects related to emissions and energy consumption, data is primarily attributed to the GASCADE network based on operation rather than ownership.

GASCADE and NGT are certified by the Federal Network Agency as independent, fully regulated TSO under German law and in accor-

dance with the Energy Industry Act. We are therefore legally obliged to conduct our transportation business in a non-discriminatory manner and independently of the interests of our direct or indirect shareholders. The fulfilment of these obligations is monitored by an internal compliance and equal treatment program, an equal treatment officer who is not bound by instructions, and by the Federal Network Agency.

This sustainability report refers to the reporting period January 1 to December 31, 2024. For our sustainability reporting, we follow the internationally recognized Global Reporting Initiative (GRI) standards and apply the specified structure. For any inquiries regarding this report, please contact GASCADE's Sustainability Management team. You are welcome to contact us via e-mail at [nachhaltigkeit@gascade.de](mailto:nachhaltigkeit@gascade.de).

The content of this sustainability report and the identified topics have been approved and endorsed by our executive management. An external audit has not been carried out.

Together with its sister company NGT, GASCADE plans, builds, and operates one of the largest long-distance gas networks in Germany. We offer our customers competent and comprehensive transportation services. With our pipeline system of more than 4,100 kilometers, we connect several

European countries directly with each other. We contribute to a secure energy supply for Germany and Europe through reliable gas transportation – today with natural gas and in the future with hydrogen. The first pipeline sections are scheduled to be converted for hydrogen transport in 2025.

Around 550 employees at 15 locations across Germany are working to ensure reliable gas transport today – and help shape the energy systems of tomorrow. We ensure flexible gas transport to around

100 exit points. In our business activities, we distribute gas for the heating market, to power plants for electricity generation, and to various industrial customers throughout Germany. Natural gas continues to play a key role in industrial thermal and chemical processes. Its importance in electricity generation is also growing in light of the nuclear phase-out.

Our business partners include gas importers seeking to transport natural gas, biogas, and hydrogen,

or synthetic methane to or within Germany. On the other hand, gas traders and downstream network operators book our gas transport capacities and act as intermediaries with gas consumers. Efficient data handling for metering and gas transport relies on a complex IT (information technology) landscape, necessitating cooperation with dedicated IT service providers. Likewise, large-scale pipeline projects depend on specialized engineering and construction firms. We operate high-performance compressors to transport gas volumes at high



pressure levels. We work closely with plant and mechanical engineers for these assets.

## 2.2 Organizational Structure

GRI 2-1, 2-9, 2-10, 2-11, 2-12

The corporate governance of the independent transmission system operators GASCADE and NGT consists of a supervisory board in addition to the management board in accordance with the binding provisions of the German Electricity and Gas Supply Act (Energy Industry Act). The supervisory board must be formed in accordance with the relevant provisions of the German Stock Corporation Act. The supervisory board performs the tasks incumbent upon it in accordance with the law and the Articles of Association and acts in the interests of the companies. Although the supervisory board may not exercise a management function, certain management decisions require the approval of the supervisory board. The Energy Industry Act also assigns certain responsibilities to the supervisory board, such as the decision on the appropriation of the annual results. It fulfills its function by holding regular supervisory board meetings and submitting reports on the course of business, the company's situation, and fundamental questions of business policy. Sustainability issues are the subject of both the meetings and the management reports.

The Supervisory Board of GASCADE consists of four

representatives of our shareholder SEFE Securing Energy for Europe GmbH and two independent Supervisory Board members. Two of the representatives of our shareholder are managing directors at SEFE Securing Energy for Europe GmbH. Since 2024, the independent members have been elected directly by our employees. As part of our efforts to promote diversity at all levels, we are pleased that one-third of our Supervisory Board is made up of women.

## 2.3 Memberships

GRI 2-28

GASCADE is in the process of converting parts of its infrastructure for future hydrogen transportation and, where necessary, constructing new hydrogen pipelines. Numerous players are supporting the emerging hydrogen market and its infrastructure with their focus on everything from market design to regulatory framework conditions. GASCADE is actively involved in various initiatives and associations to help shape this change.

One of these initiatives is AquaVentus - an association of over 100 companies and organizations from industry and research. Our managing director Christoph von dem Bussche is a member of the AquaVentus board, underlining our commitment as a company for green hydrogen solutions. AquaVentus aims to usher in a new era of climate-friendly energy with the production of green hydrogen in the German North Sea. The association and its members are aiming to install 10 GW of green hydrogen production capacity from offshore wind by 2035. An integral part of the initiative is the transport infrastructure planned by GASCADE subsidiary AquaDuctus Pipeline GmbH in the North Sea - AquaDuctus.

The newly established European association European Network of Network Operators for Hydrogen (ENNOH) is strongly committed to the development



of a European hydrogen infrastructure onshore and offshore in alignment with the European gas and hydrogen package. The aim of ENNOH is to strengthen cooperation between network operators and create the necessary framework conditions for the development of an efficient hydrogen transport infrastructure at European level. In the year under review, GASCADE managing director Christoph von dem Bussche was elected as the first president of ENNOH.

Additionally, GASCADE is actively involved in these associations and initiatives, among others:

- BDEW German Association of Energy and Water Industries e.V.
- DVGW German Technical and Scientific Association for Gas and Water e.V.
- DWV German Hydrogen Association e.V.
- World Energy Council e.V.
- Association of TSOs for Gas e.V.
- ENTSG European Network of Transmission System Operators for Gas
- VST Association of Secure Transportation and Distribution Networks / KRITIS e.V.
- EASEE-gas, the European Association for the Streamlining of Energy Exchange - gas
- GIE Gas Infrastructure Europe
- OGMP Oil & Gas Methane Partnership 2.0
- H2Global Foundation
- Hydrogen Germany



GASCADE supports the public objective of strengthening the legitimacy of parliamentary and governmental decision-making processes by ensuring transparency in political influence. GASCADE therefore documents its own lobbying activities as part of the political decision-making process in the Bundestag's lobby register.



## 2.4 Complaints Management

### GRI 2-25

According to the quality management process description, any issue raised by customers or contractual partners that cannot be resolved within one day is classified as a complaint. The focus is therefore on the customer and partner relations within the capacity management department. All complaints received by the capacity management department over the course of a calendar year are compiled and presented to management in a year-end report. The complaints are grouped into categories and initial solutions/resolution approaches are presented. In 2024, we received six complaints from business partners. These can be grouped into the categories of technical difficulties and dissatisfaction with negotiation results. All technical problems were resolved at an early stage. GASCADE continuously maintains a solution-oriented dialog with its business partners to ensure stable and trusting business relationships. As a result, GASCADE had no unresolved complaints remaining from 2024.



## 3 MATERIALITY AND SUSTAINABILITY STRATEGY



### 3.1 United Nations: Global Goals for Sustainable Development

We support the United Nations' sustainability initiative and are committed to actively contributing to the implementation of the 17 Sustainable Development Goals. We focus on the areas of action that are most important to us strategically. We are particularly focused on achieving three specific goals, to which we are already contributing through various measures:

#### **5 Gender equality**

Goal: Promote gender equality and ensure equal participation in professional career and develop-

ment opportunities within the company.

Promoting equal opportunities is an important concern for us – even though we are still at an early stage in identifying targeted and effective measures in this area. Diversity and openness have always been part of our corporate culture. With suitable framework conditions for actively promoting gender equality, we see the potential to develop further. We are working to systematically strengthen equal opportunities and to create an inclusive working environment in which diversity is seen as an asset. Initial steps include initiatives such as Women@GASCADE, which foster dialogue and increase visibility for women and gender equality topics within the company (see section 5.4). Our corporate strat-

egy also aims to increase the proportion of women in the company overall and in leadership positions with personnel responsibility, and to promote diversity (see Section 3.5). Ultimately, our goal is to ensure fair career and development opportunities for all employees and to remove structural barriers over the long term.

#### **7 Affordable and clean energy**

Goal: Ensure access to affordable, reliable, sustainable, and modern energy for all.

Ensuring an efficient and reliable energy supply for our customers is both our commitment and a core part of our identity. To ensure that the costs of energy transport remain affordable in a decarbonized



energy future, we are working intensively on the conversion and continued use of existing natural gas pipelines for the transport of hydrogen and climate-neutral gases (more on this in chapter 7).

### 13 Climate action

Goal: Take urgent action to combat climate change and its impacts.

To enable climate-friendly gas transport, we rely on technical solutions that aim to reduce CO<sub>2</sub> emissions and minimize methane emissions as much as possible (more on this in section 4.3). We see the significant reduction of methane as one of the most effective measures in the fight against climate change. Our plant engineers and technicians are working with great commitment on innovative processes to continuously reduce our greenhouse gas emissions. In addition, we increasingly use electric compressors instead of gas turbines and procure electricity from renewable sources wherever possible in order to reduce emissions from our business operations.



3.2 Stakeholder Survey

GRI 2-29

In 2024, we conducted a new stakeholder survey on the topic of sustainability. Our aim was to obtain as broad a picture as possible and to consider a wide range of perspectives on possible material topics in sustainability. In addition to internal stakeholders such as employees, the supervisory board, and board management, we also contacted various external stakeholders such as suppliers, transport customers, political institutions and associations, environmental organizations and authorities, banks, energy companies, and project partners and asked them to complete a short questionnaire. We received around 230 responses, most of which came from our own employees.

The potentially material topics were selected by GASCADE's sustainability management team, considering the European Sustainability Reporting Standards (ESRS) of the Corporate Sustainability Reporting Directive (CSRD), GRI Standards 2, 3, and 11 and comparisons with other companies in the same sector.

After completing the stakeholder survey, we discussed and evaluated the topics in detail in internal expert committees and applied the principle of double materiality. Double materiality is characterized by the fact that both the impact of corporate activities on the environment, people, and society (inside-out

perspective) and the effect of sustainability issues on the company's business activities (outside-in perspective) are considered.

We then combined the results of the stakeholder survey and the expert committees, whereby we weighted the latter results higher, as the topics were discussed in more detail and with greater expertise.

3.3 Material Topics

GRI 3-1, 3-2, 3-3

We have taken the GRI 11: 2021 Oil and Gas standard and the results of our stakeholder analysis into account when assessing the material topics for us.

Together with SEFE, we have also prioritized key topics within the group. As the SEFE Group, which includes companies from the energy transport, storage, and trading sectors, we have identified the following topics as being of overriding importance:

- Green energy transition
- GHG emissions (Scope 1, 2, and 3)
- Energy security
- Employment practices
- Diversity, equity, and inclusion
- Governance, compliance, and business ethics
- Stakeholder engagement
- Innovation & digitalization

These are all areas where, as the SEFE Group, we aim to drive change through our actions and make our contribution toward a more sustainable future.

As a regulated network operator, we are responsible for the construction and operation of our gas infrastructure and gas transportation within Germany, and we perform this function as a service provider for other German network operators. Due to regulatory and legal requirements, transportation is strictly separated from the production, storage, and trading of gas. For this reason, many of the material topics listed in the GRI 11: 2021 Oil and Gas standard are not classified as material for us. For many topics, there is either insufficient probability of occurrence or we did not consider the impact to be material.

The following list presents the material topics prioritized for our transport companies. We have chosen a traffic light system to illustrate the respective priority for us. We consider the issues highlighted in green to be material and those highlighted in red to be immaterial. We rate the topics in yellow as currently not material, although they have the potential to become material topics in the coming years, which is why we continuously evaluate them - just like the other material topics.

In our materiality analysis, we applied the double materiality principle, evaluating topics based on

both their external impact (inside-out) and their relevance to our business (outside-in). In general, we will align our sustainability reporting with these material topics in the coming years. We have not yet been able to fully integrate all identified topics into our reporting for the 2024 reporting. However, we are using the time to reassess material topics to adjust our strategic focus.

List of Material Topics

- + Climate change (GHG emissions, climate-related adaptation, resilience and transition to a low-emission economy, energy efficiency)
- + IT security and data protection
- + Digitalization
- + Occupational health and safety
- + Diversity and equal opportunities
- + Employment practices

- Regulatory Developments
- Asset integrity and critical incident management
- Decommissioning and remediation
- Economic impact
- Anti-competitive behavior
- Conflict and safety
- Waste
- Water and wastewater
- Anti-corruption
- Environmental pollution (possible topics: biodiversity, air emissions, marine resources)

- Forced labor and modern slavery
- Freedom of association and collective bargaining
- Local communities
- Land and mineral rights
- Rights of indigenous peoples
- Payments to the state



3.4 Opportunity-Risk Assessment  
GRI 11-2, 201-2

Our business activities are focused on services related to gas transportation and the implementation of network connections in Germany and neighboring regions. Our networks are modern, efficient, and powerful and are designed to operate for many decades. Physical risks directly associated with climate change, such as storms, drought, or flooding, represent a manageable risk for our transport pipelines and our business activities. So far, we have not experienced any disruptions to our business operations as a result of climate change. Nonetheless, potential risks include flooding at station sites and the erosion or undermining of pipelines. However, thanks to the use of state-of-the-art telecontrol technology and the flexible transport management of our gas flows, we believe we are well positioned in this regard. Nevertheless, we are keeping an eye on climate change scenarios and analyzing their impact on our current and future business activities.

In our 2024 stakeholder survey, we invited stakeholders to evaluate the key opportunities and risks affecting our business operations. As a result, the five biggest opportunities and risks are listed here:



Opportunities for GASCADE	Risks for GASCADE
1. Climate change	1. Climate change
2. Regulatory Developments	2. Regulatory Developments
3. Use of resources and circular economy	3. Information security
4. Fair remuneration	4. Recruitment
5. Work-life-balance	5. Environmental pollution

**Opportunities for GASCADE:****1. Climate change**

- By switching from fossil gases to CO<sub>2</sub>-neutral gases such as hydrogen, we can continue to use existing infrastructure in the long term and implement new projects at the same time.
- We can reduce our emissions through energy efficiency measures and the use of renewable energies.

**2. Regulatory Developments**

- Participation in political dialog can promote appropriate framework conditions for our infrastructure to achieve the energy policy triangle (environmental compatibility / security of supply / economic efficiency).

**3. Use of resources and circular economy**

- Rededicating infrastructure for the use of hydrogen conserves resources and is more cost-effective.

**4. Fair remuneration**

- Fair remuneration increases the attractiveness for new and existing employees, which leads to low staff turnover.

**5. Work-life balance**

- Greater motivation of employees through work-life balance and support for long-term health through sports and leisure activities as compensation.

**Risks for GASCADE:****1. Climate change**

- Risk for existing natural gas infrastructure and uncertainties in the development of the hydrogen market ramp-up.
- Sanctions and risk of legal action in the event of non-compliance with legal obligations.

**2. Regulatory Developments**

- Political framework conditions are designed in such a way that they have a negative impact on our business model and may lead to higher costs.

**3. Information security**

- Failure of our infrastructure or loss of data due to IT attacks / sabotage.
- The potential for blackmail with the potential for financial damage and possible loss of reputation.

**4. Recruitment**

- Skills shortage: Too few suitable staff leads to fewer project implementations and problems with current and new business activities.

**5. Environmental pollution**

- Disproportionality of environmental measures due to strict legal requirements.
- Claims for damages and risk of legal action.

It is striking that both the greatest opportunities and the greatest risks are seen in the areas of climate change and Regulatory Developments. However, this is not surprising, as climate change and the associated decisions have a significant impact on our business model: Political and regulatory requirements are decisive for the business of a regulated transmission system operator. Nevertheless, we are confident that we are well equipped in both areas to navigate the challenges that lie ahead.

Moreover, we are well positioned to meet future challenges across diverse domains with confidence. Opportunities are derived, for example, from the social areas of 'fair remuneration' and 'work-life balance', where we are perceived very positively by our stakeholders. The prospect of transforming our pipeline network to operate more resource-efficiently is also widely recognized as a key opportunity for our company. The issue of information security is mentioned among the other risks. The increase in the threat of cyber-attacks has risen significantly in recent years. Recognizing this, we have taken a pioneering role for many years in driving the implementation of targeted measures across our industry. The issue of recruitment is becoming increasingly important in the wake of the growing shortage of skilled workers. While we do not currently see this as a fundamental threat, it remains essential that we continue all efforts to position ourselves as an attractive employer. To contain environmental

pollution and compensate for damage, we regularly implement measures to preserve biodiversity and ecological balance. Nevertheless, there is a risk that we could be confronted with claims for damages or legal action for potential environmental damage in the course of construction and operational activities. However, we currently consider the risk of this to be low. In all circumstances, we handle environmental matters with the greatest possible care. Ensuring full compliance with legal requirements is a fundamental principle of our business conduct.





### 3.5 Strategy - Corporate and Sustainability

#### GRI 2-22

##### Corporate strategy

In December 2024, we introduced an updated corporate strategy titled 'Leveraging Change: Strategic Development Through Change.' It outlines our strategic path for the years ahead and provides guidance for our day-to-day work.

Efforts to become climate-neutral by 2045 at the latest are accelerating. Moreover, Europe aims to reduce its dependency on any single major supplier to strengthen supply security. These developments have an impact on our business area and, as an important part of the German energy system, we are now facing the challenge of transforming our business and finding our role in this complex environment. We want to take advantage of the opportunities presented by change by focusing on hydrogen as another business area for us and by contributing to the development of a sustainable hydrogen economy. At the same time, we seek to ensure continued security of supply in the European natural gas market by making effective use of our infrastructure.

Our new corporate strategy is structured around several key fields of action:

##### „Strategic focus area: Natural gas“:

We want to maintain our position as a central German natural gas network operator and our position in Europe in the medium term. Even if the volume of natural gas transported will gradually decrease over the next few years, the peak demand will not decrease to the same extent: natural gas will continue to be needed in the medium term - especially for peak load times such as dark doldrums. To continue transporting natural gas, we observe that societal expectations are rising, and we must increasingly intensify our efforts in the areas of sustainability and the safe operation of our infrastructure. We are aware that we need to develop concepts for the long-term management of our infrastructure for those parts that are not needed for either natural gas or hydrogen. The issue of possible decommissioning of parts of our infrastructure is also highlighted here.

##### „Strategic focus area: Hydrogen“:

We want to position ourselves as a central hydrogen network operator in Germany with connections to neighboring European countries. Our main approach is to accelerate the progress of our hydrogen projects, both onshore and offshore, as best as possible. We are supporting the ramp-up of the hydrogen market by actively engaging in political

and regulatory processes — for example, through our involvement in establishing ENNOH at the European level. Within GASCADE, knowledge and expertise in the fields of hydrogen and offshore are being built up and broadly anchored in the company.

##### „Strategic focus area: Attractive employer“:

We are aware of the increasingly challenging labor market in Germany in the coming years and the short-age of skilled employees. Our goal is to position ourselves as an attractive employer, retaining motivated and satisfied employees and attracting new talent. This is crucial for successfully delivering our wide range of projects and managing the simultaneous demands of our natural gas and hydrogen business areas in the coming years. We see potential in various entry-level opportunities at GASCADE as well as through measures to increase the proportion of women in the company in general and in positions of responsibility to further promote diversity. The use of artificial intelligence (AI) is being driven forward at GASCADE to constantly strengthen GASCADE's efficiency and innovative strength in such a rapidly changing environment.

**Sustainability strategy**

Many of our strategic focus areas are reflected in our sustainability strategy as well. We defined the focal points of our sustainability strategy as part of our first stakeholder survey on sustainability and currently see no need to adjust them. However, we see an opportunity to dovetail our corporate strategy and our sustainability strategy even more closely in future. We intend to actively advance this process in 2025.

Our sustainability strategy focuses on four core ar-

reas where we have identified a need for action and where we seek to either enhance our performance or uphold our strong position in the years ahead. The four core topics we are focusing on are ‘environmentally friendly gas transport’, ‘stable and secure pipeline network’, ‘climate-neutral energy supply’ and ‘responsible company’. These core topics form an overarching framework for various measures that we will advance and implement over the next few years. We see them as a suitable framework for a holistic approach to sustainability at all levels of our business activities and as an opportunity to anchor

the topic of sustainability as a normative guiding principle.

The core topic of ‘environmentally friendly gas transportation’ currently encompasses most measures. Enhancing the environmental and climate compatibility of gas transportation remains our most significant challenge. This is a long-term, continuous optimization process that we cannot shape alone because load flow control depends on the needs of our transport customers. Large gas compressors, which are necessary to operate the grid, cannot be decar-

ENVIRONMENTALLY FRIENDLY GAS TRANSPORT	STABLE AND SECURE PIPELINE NETWORK
<ul style="list-style-type: none"><li>• Use of renewable energies</li><li>• Sustainable load flow control</li><li>• Methane emission reduction measures</li><li>• Renaturation and promotion of biodiversity</li><li>• Energy efficiency measures</li></ul>	<ul style="list-style-type: none"><li>• Occupational safety</li><li>• HSE measures to prevent accidents</li><li>• Security of supply</li><li>• Governance and management systems</li><li>• Digitalization</li></ul>
CLIMATE-NEUTRAL ENERGY SUPPLY	RESPONSIBLE COMPANY
<ul style="list-style-type: none"><li>• Development of hydrogen infrastructure</li><li>• Compensation measures for emissions</li></ul>	<ul style="list-style-type: none"><li>• Buildings</li><li>• Mobility</li><li>• Suppliers</li><li>• Employment Practices</li><li>• Social commitment</li></ul>

bonized in the short term. Nevertheless, we have developed various approaches to tackle these problems. For example, we are working on concepts for the use of renewable energy and are trying to optimize our load flow control using sustainability criteria. At the same time, we are reducing our methane emissions by using mobile transfer compressors.

We see less immediate need for action regarding the core issue of maintaining a stable and secure pipeline network. In general, the secure supply to our customers and the issue of occupational safety have always been our top priority and remain the basic prerequisite for economically sustainable action. We therefore aim to maintain our high standards through various activities in the area of health, safe-

ty, and environment (HSE), process optimization, and established management systems.

Another core topic, 'climate-neutral energy supply', is derived from the long-term orientation of our business activities in the transportation of gases. We are already setting the course today to prepare our network for the transportation of hydrogen and to plan the additional infrastructure that will connect hydrogen producers and consumers. In this area, the planning and construction of offshore pipelines is particularly important because the substantial production of green hydrogen will take place in offshore wind farms. On land, we are examining the conversion of existing pipelines from a technical and economic perspective. To get closer to the goal of cli-

mate neutrality, reducing and avoiding emissions is a high priority. However, some emissions cannot be reduced in the short term for economic or process-related reasons, which is why offsetting emissions can make a valuable contribution in some cases.

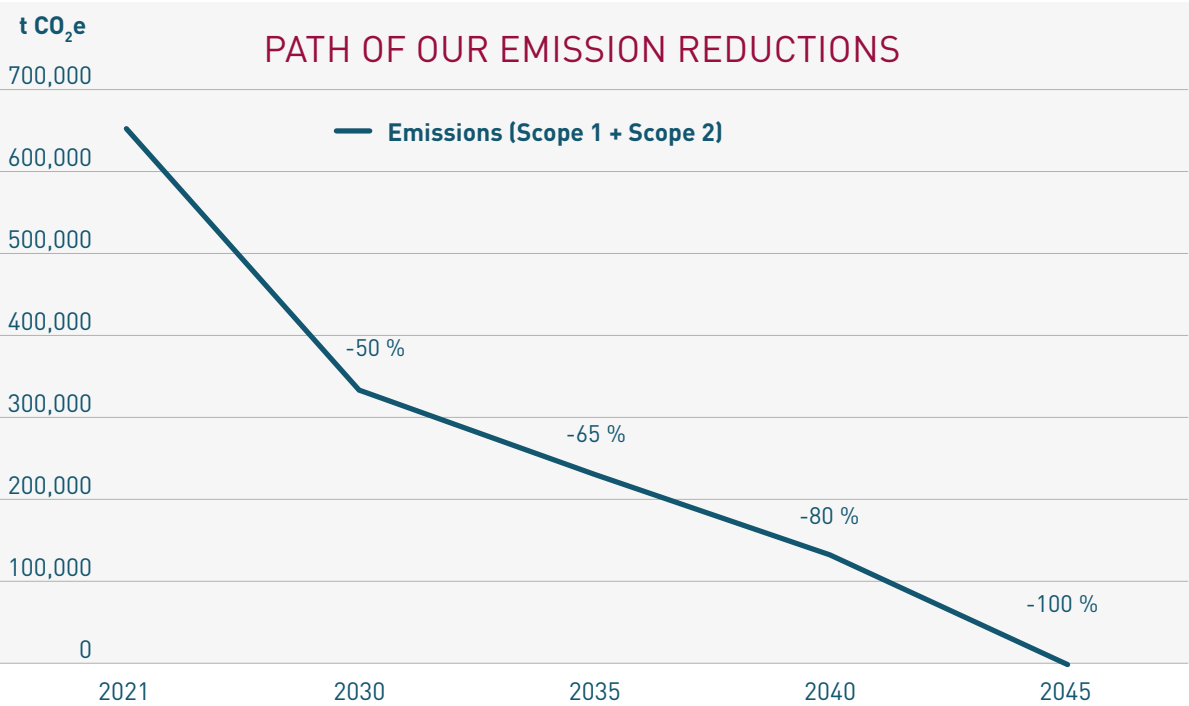
We take a holistic approach to sustainability and actively work to make even non-core business processes more sustainable. We therefore see ourselves as a 'responsible company'. The operational focus on key issues is important, but we are rethinking the way we do business to conserve resources at all levels. This includes, for example, sustainable mobility for our employees, sustainable office and factory buildings and their management, as well as our social commitment.



3.6 Our Path to Climate Neutrality

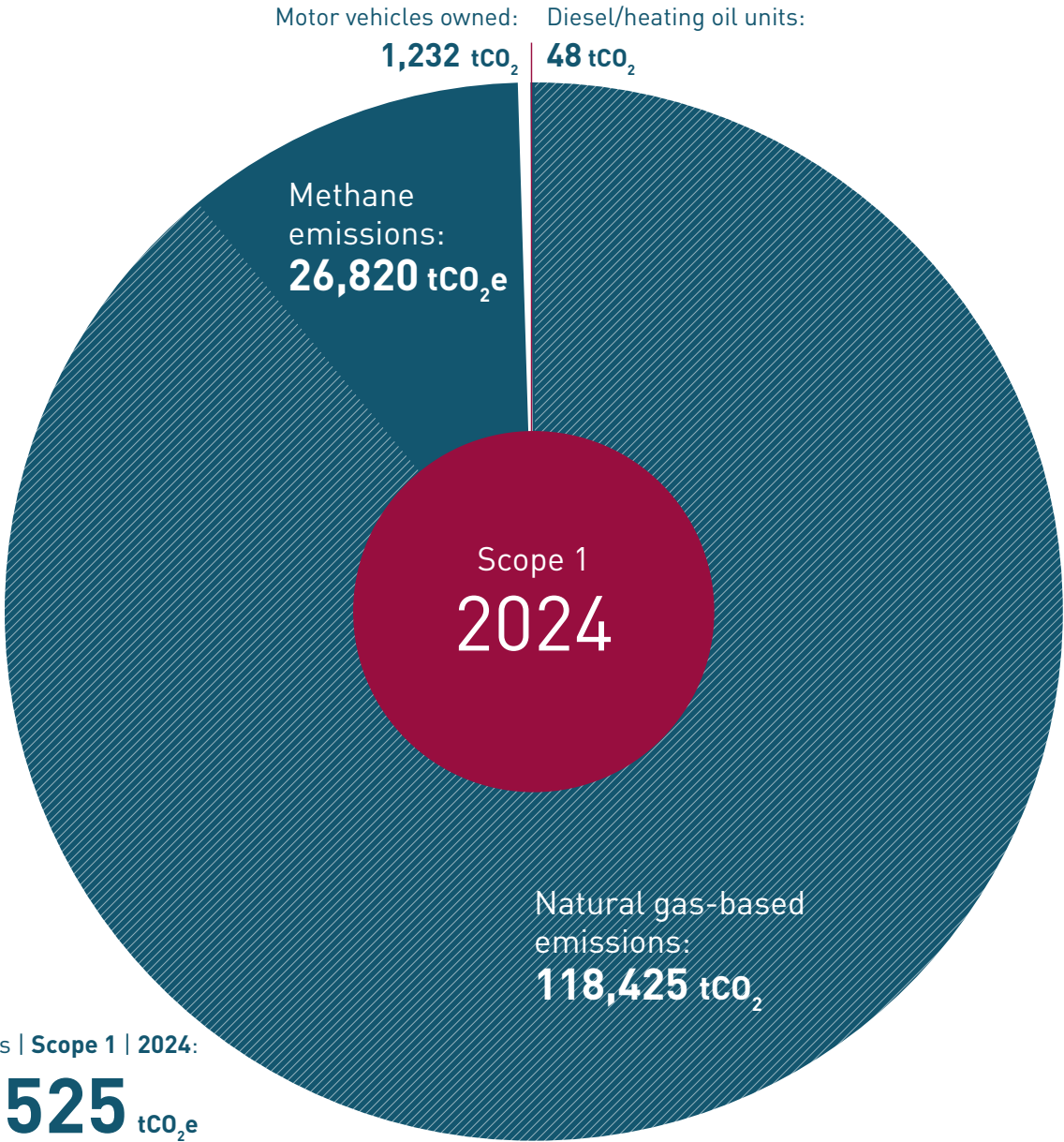
GRI 11-2, 305-5

We are committed to the goals of the Paris Climate Agreement and the German Climate Protection Act and want to make our contribution to a climate-neutral world. The following chart shows our reduction path in the coming years with the clear goal of reducing our activity-related emissions to net zero by 2045 at the latest. In general, we believe that our company is well equipped for the transition to a low-emission economy. Assuming that hydrogen and climate-neutral gases will play a significant role in the future energy supply, we will be able to continue operating our infrastructure in mostly the same way as we do today. GASCADE employees are already working on this energy future, wanting to play an active role in shaping the transition to a climate-neutral energy future by providing the necessary infrastructure. We have already achieved significant reductions in our Scope 1 and 2 emissions and, thanks to exceptionally favorable transport conditions, we will already achieve the targets by 2030. But even under normal transport conditions, we are optimistic that we will be able to achieve the 2030 targets and also the 2040 targets.



Base year	approx. 650,000 t CO <sub>2</sub> e
2030	-50 %
2035	-65 %
2040	-80 %
2045	-100 %





Total emissions | **Scope 1** | 2024:  
**146,525 tCO<sub>2</sub>e**

# 4 ENERGY AND ENVIRONMENT

## 4.1 Emissions

### 4.1.1 Scope 1 GRI 11-1, 305-1

**SCOPE 1**

- Natural gas-based emissions
- Motor vehicles owned
- Diesel/heating oil units
- Methane emissions

### Emission sources

By far our largest direct sources of emissions are compressor units and stations powered by natural gas. Our Scope 1 emissions are therefore primarily generated by natural gas-based consumption units. Natural gas is used to heat buildings at many locations as well. In addition, most of our stations have diesel-powered emergency supply units which are operated every year at least once for testing purposes and therefore cause direct emissions. Scope 1 emissions also include methane emissions, which are caused by operations and arise as fugitive emissions during our grid operation. In ad-

dition, the emissions from our motor vehicles must be included. A significant part of our current measures in the area of energy and the environment (see also 4.3) are primarily aimed at reducing our methane emissions, but the efficient use of energy is becoming increasingly important for us as well.

Calculation methods

We have adopted the operational control approach for consolidating our Scope 1 emissions, consistent with the method used for other reporting obligations. As we operate individual operating units as joint owners, an ownership-based allocation of emissions would be more advantageous for us, but we would like to proceed as uniformly as possible with the published data. We calculated the emission values based on measured natural gas consumption and standard emission factors of the British government’s Department of Environment, Food & Rural Affairs (DEFRA). The calculation of the carbon dioxide equivalents (CO<sub>2</sub>e) of methane was based on the relative global warming potential (GWP) with a time horizon of 100 years. For the Scope 1 emissions recorded, we have limited ourselves to the greenhouse gases carbon dioxide (CO<sub>2</sub>) and methane (CH<sub>4</sub>), which are material for our business activities.

SCOPE 1

	Base year	2024
Natural gas-based emissions	544,743 tCO <sub>2</sub>	118,425 tCO <sub>2</sub>
Motor vehicles owned	0 tCO <sub>2</sub>	1,232 tCO <sub>2</sub>
Diesel/heating oil units	44 tCO <sub>2</sub>	48 tCO <sub>2</sub>
Methane emissions	61,100 tCO <sub>2</sub> e	26,820 tCO <sub>2</sub> e
Total emissions	605,887 tCO <sub>2</sub> e	146,525 tCO <sub>2</sub> e

In the methane area, the emissions are based on an extrapolation of our database between 2017 and 2020.



We recorded an exceptional drop in Scope 1 emissions in 2024. We were able to reduce these by more than half while maintaining a transport performance comparable to the previous year. The high-pressure level in the upstream network and the connected storage facilities made this possible, among other things, and led to a significant reduction in the operating times of our natural gas compressors. As a result, emissions are significantly lower than in the base year.

4.1.2 Scope 2

GRI 305-2, 305-4

**SCOPE 2**

- Electricity
- District heating

Emission sources

Our Scope 2 emissions are made up of the purchase and use of electricity and district heating. We need electricity to drive our electric compressors and generally for the building management of our company headquarters and our operating sites. Currently, we do not purchase district heating for buildings that we own.

SCOPE 2 (MARKET BASED)

	Base Year	2024
Electricity	28,863 tCO <sub>2</sub>	94,728 tCO <sub>2</sub>
District heating	14,859 tCO <sub>2</sub>	0 tCO <sub>2</sub>
Total emissions	43,722 tCO <sub>2</sub>	94,728 tCO <sub>2</sub>

Calculation methods

To calculate our Scope 2 emissions, we have chosen operational control over the operating units as the consolidation approach, as we did for Scope 1 emissions. We calculated the emission values based on measured electricity consumption and standard emission factors of the Association of Issuing Bodies (AIB).

Our Scope 2 emissions are higher than the base year because the flow direction in our network has changed since 2022, resulting “in an increased” use of electric compressors that were not previously connected to the public power grid. With an additional connection to the power grid, which is to be implemented by 2028, the use of fossil fuels in compression can be reduced and our Scope 2 emissions significantly lowered.

This year, the emission intensity, which is calculated from emissions in tCO<sub>2</sub>e (Scope 1 + 2) per transported energy in TWh, amounts to 676 tCO<sub>2</sub>e/TWh.

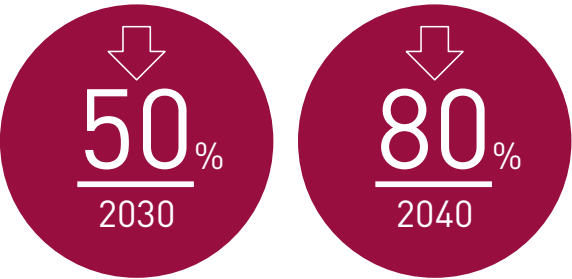
4.1.3 Emission Reduction Targets

In 2024, we established a shared emissions reduction target at the SEFE Group level, to which we are fully committed. We have decided to combine the reduction of Scope 1 and Scope 2 emissions, as both types of emissions can be directly influenced by our business activities. By taking a joint approach, we

can leverage synergies in reducing emissions, plan actions more strategically, and provide a clearer, more comprehensive view of our climate impact. We use the average emissions from 2017-2020 as the base year period for our Scope 1 and Scope 2 emissions. This method helped balance year-to-year deviations and provide a more realistic representation of our emissions.

We are committed to achieve a 50% reduction in Scope 1 and 2 emissions by 2030 and an 80% reduction by 2040, based on our base year period. As of 2024, we have already reduced our emissions substantially, achieving almost a 63% decrease relative to the base year. However, this is partly due to an exceptional situation in the upstream network. Nevertheless, we are optimistic that we will achieve the 2030 targets even under normal transport conditions and at the same time prepare for further reductions.

Targets



4.1.4 Methane Emissions

Reduction of methane emissions by 70 % by 2025\*\*\*

\*\*\* compared to the base year 2015

Reduction of methane emissions by 75 % by 2030\*\*\*

\*\*\* compared to the base year 2015

We remain committed to the continued reduction of our methane emissions. Our short and medium-term targets are to reduce methane emissions by 70% by 2025 and 75% by 2030.

In the current reporting year, we have already reduced our methane emissions by over 75% compared to our base year 2015. Thus, our measures to minimize our methane emission sources have an impact. As a result, we were able to achieve our 2030 target ahead of schedule. If we can confirm this success next year, we will reassess our medium-term target corridor. In 2024, we also carried out another comprehensive measurement campaign for our entire pipeline network (including NGT). The process included the inspection of 260,000 measurement points and the simultaneous execution of system-specific measurements. We were the first German network operator to carry out this comprehensive measurement for the third year in a row.

We received the Gold Standard for reporting our methane emissions as part of the International Methane Emission Observatory (IMEO) of the United Nations Environment Programme (UNEP) for the third time in a row in 2023. We are very optimistic that we will receive the Gold Standard again for the 2024 reporting year, but the final decision is still pending. GASCADE reports on methane emissions for its owned and externally operated plants based on regular measurements.

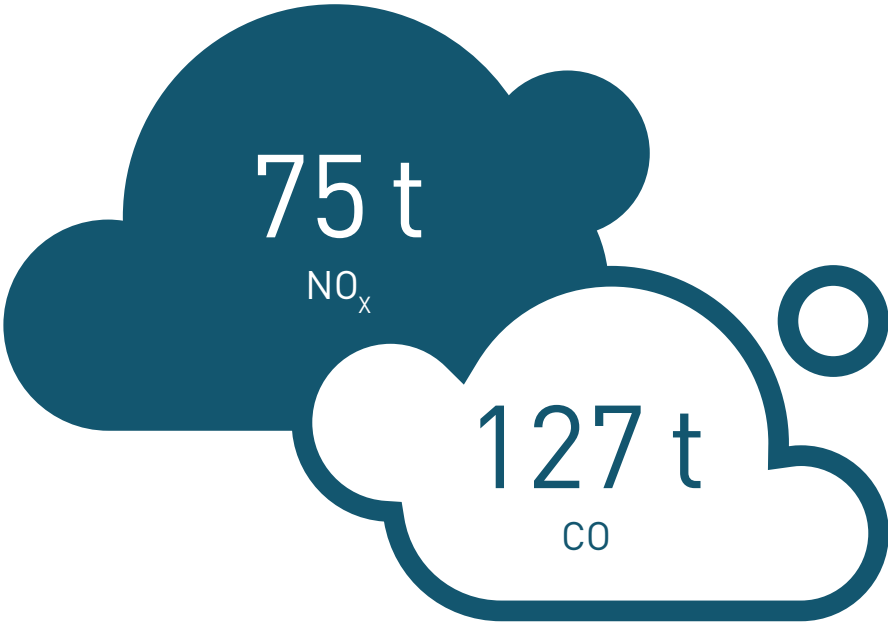
Air emissions 2023/2024 in comparison

Year	2023	2024
NO <sub>x</sub>	195t	75t
CO	213t	127t

4.1.5 Air Emissions

In addition to CO<sub>2</sub> and methane emissions, we continuously record other air emissions, primarily carbon monoxide (CO) and nitrogen oxides (NO<sub>x</sub>), and report on these in accordance with the Federal Immission Control Act (BImSchV). Our HSE department regularly takes measures to improve combustion processes and reduce process-related air emissions.

We were able to reduce our air emissions in 2024 compared to the previous year. The reduction in emissions is due to the shorter running times of natural gas-based compressors.





4.2 Energy

GRI 11-1, 302-1

4.2.1 Energy Consumption

GRI 302-3

Furthermore, we were able to significantly reduce our total energy consumption compared to the base-year period. As a result, our energy consumption was only a quarter of the average value for 2021. The sharp decline in the use of natural gas for our compressors has an impact on our energy consumption in 2024. We assume that our energy consumption will increase again in 2025. Irrespective of possible special effects, we want to continuously reduce our energy consumption, al-

though we are dependent on the bookings of our transport customers regarding network operation and the associated use of compressors. We aim to further reduce energy consumption by developing and implementing energy efficiency measures.

This year, the intensity of energy consumption amounts to 0.002 kWh/a. It represents the energy consumption in kWh/a (consumption within the organization excluding the vehicle fleet) per transported energy in kWh/a.

4.2.2 Share of Renewable Electricity

Our share of renewable electricity was 26.2% in 2024. We were therefore able to increase this share slightly compared to the previous year. We will be able to improve steadily in small steps. The replacement of a large fossil-fuel power plant to supply power from 2028 is in progress and will give us the opportunity to significantly increase the share of renewable electricity from this date.

Total energy consumption

Used energy source	Power consumption (kWh/a)		Share of total energy consumption (%)	
	Base year	2024	Base year	2024
Electricity	39,563,640	140,536,373	1 %	19 %
Natural gas	2,683,859,674	584,412,396	96 %	81 %
District heating	87,031,996	-	3 %	0 %
Diesel/fuel oil	164,567	177,695	0.01 %	0.02 %
Total	2,810,619,848	725,126,465	100 %	100 %

### 4.3 Measures in the Area of Energy and the Environment

As part of our certified energy management system in accordance with DIN EN ISO 50001, we pursue the clear goal of continuously improving energy efficiency at GASCADE and NGT. In doing so, we specifically support all areas of the company in implementing measures to reduce energy consumption. The second monitoring audit took place in 2024, during which the auditor highlighted the generally high level of awareness of energy management issues among employees. Employees are very committed to finding solutions for energy-related issues.



We continued a number of initiatives first reported in the 2023 Sustainability Report. One example of this is increasing the efficiency of gas turbines by washing the axial air compressors. A saving of 250 MWh was achieved here in 2024.

In the current reporting year, we were able to significantly reduce energy consumption and emissions through further measures. These include, among others:

#### Optimization of gas volume control between Eynatten and Weisweiler

Eynatten (Belgium-Germany) has been one of the most important interconnection points into the GASCADE grid since 2021.

Until 2023, the gas volume and pressure were regulated directly at the border in the Eynatten pressure regulating and metering station (PRMS), which is located around 24 kilometers from the Weisweiler compressor station (CS). For process-related reasons, the gas pressure was reduced by approximately two bars. This resulted in increased electrical drive energy consumption at the compressor units in Weisweiler to raise the pressure back up. In 2023, GASCADE employees carried out several tests together with a specialist company with the aim of relocating the pressure and volume control from Eynatten to Weisweiler. The results were very positive: The new control mechanism applied directly at the compressor units, combined with the reduced pressure differential, enables a par-

tial reduction in electric drive power consumption. The new control system has been active since May 2024.

#### The advantages at a glance:

- Calculated savings in electrical drive energy for 2024: 4,300 MWh
- Noise reduction: the new control system reduces potential noise pollution in Eynatten

#### Automated provision of energy data

To analyze and optimize our energy consumption more effectively, we are working on automated integration, visualization, and evaluation of our energy data. The objective is to centrally provide all relevant consumption data through an interactive Qlik Sense dashboard, eliminating the need for manual input. This allows users to easily access and analyze load profiles, data tables, and insightful visualizations.

Another focus is on improving data quality: the data should be plausible, transparent, detailed, historically traceable, and quickly available from a single source.

Behind this project are extensive infrastructure measures, particularly for electricity consumption data - from the selection of suitable measuring devices to data transmission and processing through to the integration of various software systems.

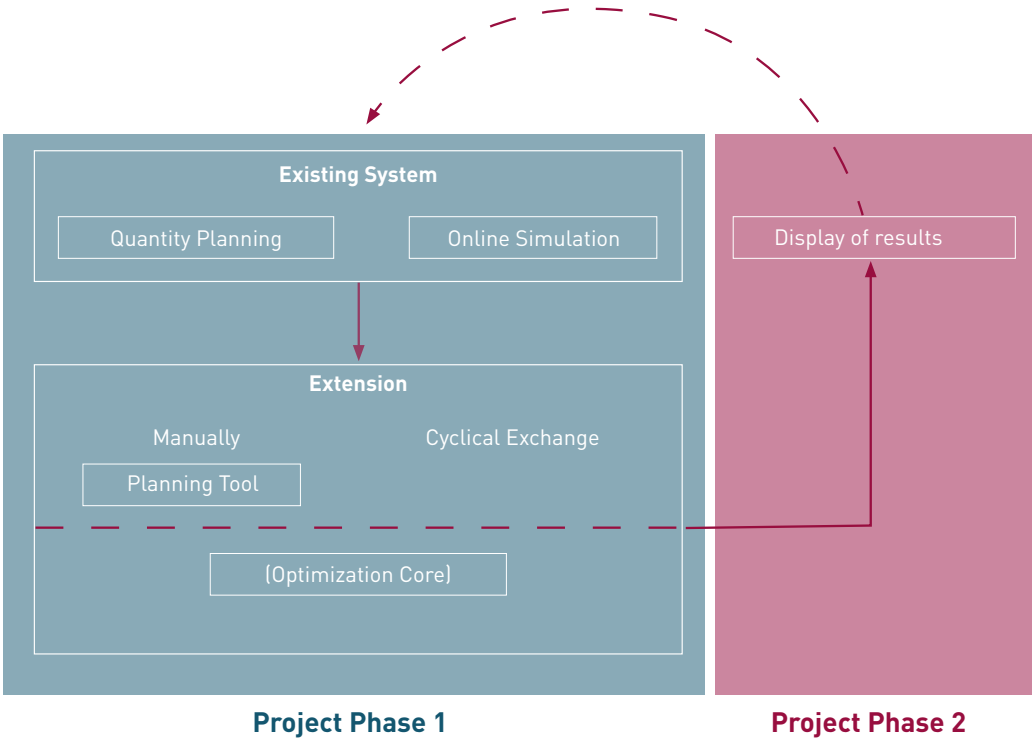
The existing data sources - such as measurement and consumption values for natural gas - will be integrated into our data warehouse via existing interfaces. Based on this, we are developing a 'Qlik Sense app' for energy evaluation which will serve as a central platform for evaluating our energy consumption in the future.

**Optimization of gas flow steering**

GASCADE is working with an IT service provider to develop a new software solution that will make the operation of the gas network even more efficient and predictive. The aim of this cooperation is to develop an application that can be used to optimize the current network operation - i.e. how the gas is routed through the network with different compressor combinations and their optimal operating points for the current order situation. Future input data such as nominations and volume registrations as well as planned maintenance or expansion projects are considered. The goal is to enhance efficiency in both energy consumption and network stability through the software — a key factor in ensuring the safety of our transport operations.

The optimization is based on an existing system, now being extended with a new application. It applies intelligent algorithms to determine the most efficient grid operating mode. The results are evaluated using KPIs (key performance indicator) and integrated into daily operational workflows. In the first phase of the project, the technical core

for the optimization calculations will be developed. The second phase involves close collaboration with the dispatcher teams to gather their requirements and present the results in a way that provides a solid foundation for decision-making.



**Description of figure:** Quantity planning and future data are derived from the existing system. These are automatically analyzed in a specific cycle in the extension and should be available to the dispatchers as a decision-making aid. The software will be used as a manual planning tool to calculate and assess possible future scenarios as well.





#### 4.4 Ecology and Biodiversity

The construction of new infrastructure for gas transport and the maintenance of our facilities are associated with interventions in nature and the landscape as defined by the Federal Nature Conservation Act. The Sustainability Report 2022 already provided an overview of the nature conservation measures implemented to compensate for the construction of the Europäische Gas-Anbindung-sleitung (EUGAL). In 2024, a series of compensation measures for EUGAL reached the final approval stage.

One example is the measure titled 'Conversion of intensive arable land into landscape hedges', located near Flemsdorf in the Uckermark region of

northern Brandenburg which was granted final approval. In March 2021, a landscape hedge stretching almost one kilometer was planted on former arable land and secured with a wildlife protection fence. The shrubs were then maintained and watered over four summers. Thanks to the fertile soil, this hedge had already reached a mature stage by 2024. The hedge provides food and hiding places for numerous animal species. The hedge near Flemsdorf serves as a stepping stone biotope, allowing animals to migrate between the protected areas 'Felchowseegebiet' and 'Unteres Odertal' and connecting otherwise isolated habitats.

In the south of Saxony, the 'Ecological enhancement on both sides of Olbernhauer Straße' package of measures was successfully completed. Near the village of Rübenau, various ecological measures were implemented across an area of approximately three hectares. These included the development of pollarded willows, the construction of a deadwood fence, and the removal of lupine as an invasive species. Additional efforts involved the creation of reptile habitats using fieldstones ('reptile castles'), the construction of a path with a dry-stone wall, and the clearing of a mountain meadow from quaking aspen. A series of ponds was created to support endangered bird species, and a flowering area was established to promote biodiversity. These measures serve to protect species and biotopes.





#### 4.5 Water and Waste Management

As part of our core business, the transportation of energy, our transport companies generate unavoidable waste. This waste is collected by local waste disposal companies. Paper, plastic, and metal waste is recycled, while residual waste is sent for thermal recycling. Wood waste is further processed by the recycler.

We collect and analyze the necessary data on waste disposal to comply with legal and internal reporting obligations. Since 2015, GASCADE has prepared an annual waste balance sheet which includes wood, residual waste, paper, packaging, hazardous waste, and special waste. In 2024, GASCADE and NGT generated a total of around 109 tons of waste, including around 25 tons of hazardous waste. This was disposed of professionally and - depending on its properties - some of it was recycled.

Wastewater at our sites is disposed of in accordance with local regulations. In the reporting year, the volume of freshwater and wastewater amounted to 10,518 cubic meters.







## 5 PEOPLE

With a team of around 550 employees, GASCADE has implemented some of the largest pipeline projects in Germany. We benefit from 30 years of experience in pipeline construction and gas transportation, as well as from the innovative spirit and commitment of our employees. Our employees come from diverse backgrounds and work on interdisciplinary projects that are crucial to ensuring safe gas transportation and advancing the energy transition.

### 5.1 Occupational Safety and Accident Statistics

As a certified TSO and responsible employer, we attach the highest priority to health, safety, and environmental protection. They form the basis of our actions and always take precedence over economic interests - both for our two companies and for each individual employee.

Our HSE awareness is the result of many years of experience in the construction and operation of transmission networks and regular reviews through analyses, audits, and employee training. In addition, our internal suggestion scheme plays a key role in the further development of HSE measures and the associated awareness-raising.



We take our social responsibility towards our environment and the public very seriously - and expect the same from our business partners and service providers. The focus here is on safe and healthy workplaces - for our employees as well as for external partners.

It is particularly pleasing that our accident statistics remained at a consistently low level in 2024. This is all the more remarkable given that the number of hours worked - particularly by contractors - has increased significantly.

**HSE guidelines and employee training on occupational safety**

To ensure a high level of occupational safety for all employees, we have developed various guidelines that are tailored to the specific requirements of their day-to-day work. Our employees on construction sites have their own installation manual that covers all relevant safety standards. Our service providers are subject to the strict requirements of our HSE contractor guidelines. This becomes a binding part of the contract when an order is placed and supplements the HSE pre-qualifications that are carried out regularly.

The HSE guideline takes precedence over all HSE manuals which are part of our HSE management system. The individual manuals are aimed at specific organizational units and areas of activity with clearly defined designations. We regularly carry out topic-specific training - in particular on risk assessments and operating and work instructions.

These training courses are fully documented. The training plans for all employees are set out in detail in the respective manuals.

**Accident Statistics 2023** (per: 31.12.2023)

	Own employees	Contractors	Over all
<b>FAT</b> (fatality)	0	0	<b>0</b>
<b>LTI</b> (lost time incident)	1	1	<b>2</b>
<b>RWC</b> (restricted work day case)	0	0	<b>0</b>
<b>MTC</b> (medical treatment case)	0	1	<b>1</b>
Working Hours	943,236	880,983	<b>1,824,219</b>
<b>LTIF</b> rolling average (lost time injury frequency; last 12 months; and 1,000,000 working hours)	1.06	1.14	<b>1.1</b>

Numbers partially rounded

**Accident Statistics 2024** (per: 31.12.2024)

	Own employees	Contractors	Over all
<b>FAT</b> (fatality)	0	0	<b>0</b>
<b>LTI</b> (lost time incident)	1	1	<b>2</b>
<b>RWC</b> (restricted work day case)	1	2	<b>3</b>
<b>MTC</b> (medical treatment case)	5	2	<b>7</b>
Working Hours	1,005,156	1,576,286	<b>2,581,443</b>
<b>LTIF</b> rolling average (lost time injury frequency; last 12 months; and 1,000,000 working hours)	0.99	0.63	<b>0.77</b>

Numbers partially rounded



5.2 Employment Relationships

GRI 2-7, 2-8

550 employees

Our transport companies continue to grow so that we can reliably manage today’s gas transportation and tomorrow’s hydrogen infrastructure. As in the previous year, the number of our employees increased by almost seven percent.

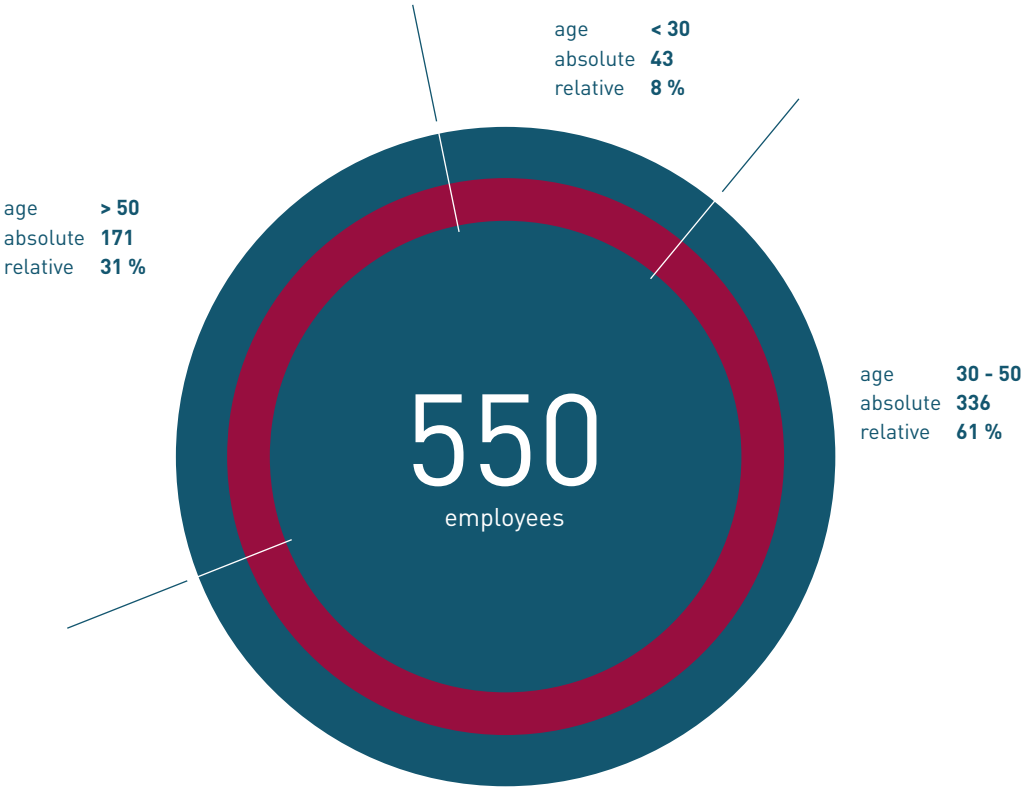
Employment relationships

Employees at GASCADE and NGT have a secure and long-term future. 94% of the approximately 550 employees are employed on a permanent basis, the majority (86%) full-time. Both the proportion of permanent employees and the ratio of full-time to part-time employees are at a very constant level compared to the previous year. Significantly more women work part-time than men.

We determine the number of employees as of December 31 of each year. No temporary workers were employed at GASCADE on this reporting date. In all cases, they worked for us for the intended period of employment, which is why there was no fluctuation in the number of temporary employees.

Age structure

There have been changes to our age structure as a result of new data collection. As we no longer include working students in these statistics, the





proportion of employees <30 has therefore decreased significantly. In absolute terms, however, the changes are minor. We have seen the largest increase in employees in the 30-50 age range.

**Sickness rate and employees with disabilities**

The sickness rate was just over four percent in the reporting year, a slight increase on the previous year. Around three percent of our employees have a recognized degree of disability.

**Employee turnover**

In the reporting year 2024, 11 employees left our company (excluding working students). Measured against the total number of employees, the turnover rate is 2.2 percent, which remains at an extremely low level for our transport companies.

Exit	
male	11
female	0
Fluctuation Rate	2.2 % (previous year: 1.95 %)

**5.3 Worker Participation**

GRI 2-30

Both our companies are committed to freedom of association, collective bargaining, and the protection of employee representatives. Particular emphasis is placed on trusting and continuous cooperation with all company co-determination bodies.

**Our works council**

Our transport companies have a works council at the Kassel site with nine members, a works council in the East and West operating areas with five members each, and a general works council. The latter consists of six members who are delegated from the three works council committees.

The works council represents employees covered by the collective agreement and those in positions outside the collective bargaining agreement.

A new works council is elected every four years.

The elected body in turn elects the chairperson and deputy chairperson from its ranks. The last election took place in 2022.

The Works Council has concluded numerous company agreements with the employer on the following topics:

- Arrangements for a retirement plan (pension fund)
- Working time regulations
- Remuneration
- Appraisal interviews
- Representative body for severely disabled persons
- Work-life balance

These works agreements are available for all employees to view on the intranet.

There is also a representative body for severely disabled employees at the Kassel site. Its members participate in the meetings of the works council and general works council and have their own agenda item at all meetings. The representative body for severely disabled employees advises employees on job applications from severely disabled persons

and persons of equivalent status as well as on the design of workplaces suitable for the disabled. In addition, its members take part in meetings of the occupational health and safety committee.

However, the works council is not the only form of actively organized co-determination at our company. We conduct regular surveys of our employees, successfully operate an idea management system, and are covered by a collective agreement of the Mining, Chemical, and Energy Industrial Union (IG BCE).

We have concluded our own collective wage agreement with IG BCE. The current collective wage agreement is valid until June 30, 2026. It was renegotiated in 2024 together with the collective bargaining commission. In addition to the employer representative (head of human resources) and the IG BCE bargaining secretary, a total of three representatives of unionized employees are members of the bargaining committee.

The contents negotiated in our general collective agreement and in the other collective agreements within our scope of application apply, without exception, to all employees covered by the collective agreement and those in positions outside the collective bargaining agreement.

### Idea management

An effective idea management system fosters a culture of innovation by motivating employees to share creative and practical suggestions. This can improve processes and at the same time increase employee motivation through active participation. In 2024, 278 employees were active on our online idea management platform - a consistently high figure. A total of 30 ideas by 42 different authors were submitted to the new network. We were able to increase the implementation rate for ideas to over 32% - more than double the previous year's figure.

The aim is to increase this even further through leaner processes and decision-making channels and to speed up implementation.

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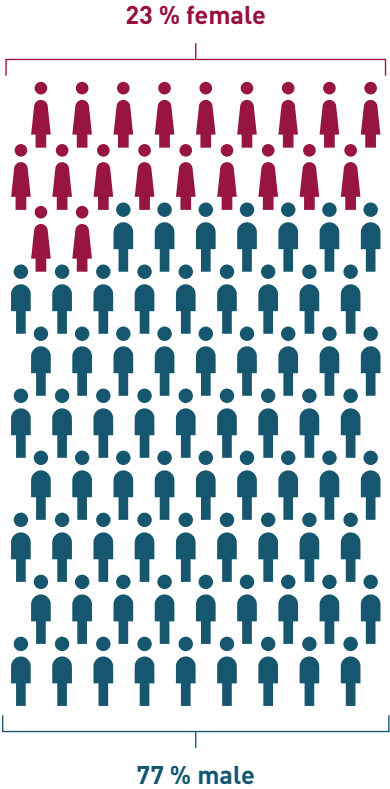
**2024****30 suggestions for improvement****42 Authors****32 % Implementation rate**

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5.4 Diversity and Equal Opportunities

Our employees come from different countries and have a wide range of experience and different professional qualifications. This applies to experienced specialists as well as to employees who have just started their careers. They share their knowledge in joint projects, complement each other, and thus make a valuable contribution to the success of our projects and the achievement of our goals. We foster a corporate culture that is characterized by respect, openness, and tolerance. We see diversity as a source of creative ideas and a driver of innovation. We consider equal treatment and equal opportunities for all employees to be a fundamental principle of our corporate culture. We currently employ people from 18 different nations.



The share of women among our employees is 23%, and the share of female managers at the end of 2024 was 11% (compared to 9% in the previous year). This is in line with the average for the energy sector in Germany - not a reason for us to be satisfied but an incentive to attract more women to work at our transport companies and in management positions.

Furthermore, we are making our application processes more inclusive : externally placed job advertisements include a commitment to diversity and a call for applications from people of all backgrounds. Requirement profiles for positions are identified in dialog with managers and communicated in the job advertisements with a diversity-oriented approach.





### **Women@GASCADE - commitment from the workforce for greater visibility of women**

At GASCADE, a strong sign of equal opportunities in practice comes from the workforce itself: in 2023, committed female employees founded the Women@GASCADE network. The aim of this initiative is to empower women in the company, increase their visibility, and break down gender-specific barriers.

Empowerment and organization were the focus activities in the initial phase. Regular networking

formats and workshops on body language, communication, and unconscious bias — introduced for the first time in the reporting year and set to be further developed in the future — serve this purpose. From the outset, it was important to the initiators to involve all employees — to ensure that equal opportunities are not only a goal but a lived reality. To this end, the network regularly organizes lecture series and launches initiatives to raise awareness of these issues among the entire workforce.

The network developed its structure to enable the continuous expansion of its work in the coming years. The network uses its own intranet page to provide information about activities within the company, recommends literature on equality and empowerment, and enables suggestions to be collected from the workforce. External communication is also carried out through a LinkedIn channel, providing impulses on gender equality and show-

casing female role models in the energy industry. Another objective of the network is to expand the current virtual and physical exchange with similar initiatives in the industry and to intensify existing contacts. In the reporting year, Women@GASCADE and GASCADE began organizing a network meeting for the year 2025. Under the title 'Future Dialogue H2: Strong Women - Strong Energy', women - regardless of age, function, and hierarchical level - will come together to actively participate in the industry's transformation process towards a hydrogen economy.

Women@GASCADE is a platform for change from within the company. The network thus makes an important contribution to an open corporate culture in which equality, diversity, and participation are actively promoted.



	Woman	Men	Total	Woman	Men
Management Board / Head of Department	0	3	3	0 %	100 %
Department Management	2	16	18	11 %	89 %
Team Leader	3	20	23	13 %	87 %
<b>Total</b>	<b>5</b>	<b>39</b>	<b>44</b>	<b>11 %</b>	<b>89 %</b>



### 5.5 Compatibility of Family and Work

As a modern employer, we know that a good work-life balance is an essential prerequisite for good performance.

We support our employees during parental leave and their return to work by offering flexible working arrangements. In 2024, a total of 18 employees took their statutory parental leave, ten of whom were men and eight women. This figure confirms that the parental leave model is an established and lived practice at our company and that many male employees also take advantage of the parental leave offer in the interests of equality. In addition, working hours can be arranged according to individual life situations in order to care for children or relatives in need of care. One employee has taken advantage of the offer of care leave for this purpose. In addition, our employees receive a financial allowance for childcare. In 2024, each employee was able to apply for a childcare allowance of 300 euros per month per child in a childcare facility to cover the actual costs incurred. For employees who would like to take a career break, we offer the option of a sabbatical year. In this case, the time off entitlement for the sabbatical phase is built up in advance during a working period. Mobile working and teleworking are valuable organizational models that also make it easier to combine work and private life.

### 5.6 Training and Further Education

At our transport companies, we rely on flat hierarchies and encourage creativity, co-design, and co-operation. It is important to us that all employees can contribute and develop their professional and personal strengths - supported by our holistic personnel development.

Every year, we offer all employees further training in the form of seminars or training courses. In 2024, 323 people took advantage of this offer, 82% of whom were men and 18% women. This represents an increase of just over 50 employees compared to the previous year. This shows that our efforts to motivate more employees to take part in training courses were successful. Furthermore, we were able to increase the share of women. Although our share of men is generally higher, we want to continue to specifically motivate more women to participate. On average, participants invested around 12 hours in further training.

In addition to traditional further training, we offer two employee development measures: internal internships of up to four weeks in other departments - twelve employees (seven men, five women) took advantage of this in 2024 - and temporary assignments in other units with a guaranteed option to return to their previous role. These measures lead to interdisciplinary collaboration being strengthened through insights into the areas of responsibility of other departments. Internal internships are being

used more frequently (cf. 2023: ten employees).

Furthermore, we are offering secondments of employees to the European industry association ENTSOG in Brussels to facilitate international exchange. The seconded employees contribute their expertise to shaping the European gas market as well. Starting next year, this will also be possible with the hydrogen association ENNOH. 36 working students gain an early insight into professional practice with us - a win-win situation for both sides.



### 5.7 Health and Pension Provision

#### Health management

Occupational health management (OHM for short) is an integral part of HR (human resources) work and occupational safety at GASCADE. It aims to provide a holistic and sustainable concept for the promotion, planning, and implementation of health aspects. Our transport companies also have a health management working group made up of employer and employee representatives. They work together on topics relating to the health of our employees. Since 2015, we have been running annual health campaigns with a changing focus and give employees the opportunity to take a closer look at their health throughout the year through specialist presentations, workshops, and campaigns. In recent years, the main topics have included

heart health, nutrition, allergies, skin health, ergonomics, thrombosis, psychological stress, and mental health.

In 2024, the focus topic was 'Our metabolism'. We used this health campaign to offer valuable tips and advice on the following topics and to promote an active metabolism:

- Blood donation and stem cell typing
- Goodbye cigarette
- Education on nutrient metabolism and metabolic disorders
- Heart age check
- Exercise
- Diet and nutrition
- Relaxation

These topics were accompanied by the 'prevention and support' working group, whose members were able to present their work and support services to all employees.

#### Company sports

We offer a variety of sports and fitness activities to encourage cross-functional collaboration, strengthen team spirit, support new employees in settling in quickly, and promote physical well-being alongside daily work. Our company sports groups – ranging from yoga and back strengthening to football and ice hockey – remain active and continue to enjoy strong participation. In addition, a volleyball company sports group is to be added in 2025. Furthermore, we are exploring new concepts for company fitness throughout Germany, from which our employees at the external sites can benefit more.

#### Pension provision

In Germany, state pension provision is primarily financed by employees subject to social security con-







tributions via a pay-as-you-go system. At the same time, the German government is calling for additional private provision. Our employees can take up the offer of a pension fund to save up additional entitlements for old age in the form of a company pension. Our two companies encourage this. Even in the case of serious and prolonged illnesses, we support all employees by providing tiered supplements to statutory sick pay based on length of service. Additionally, we offer participation in a subsidized program for acquiring stock ETFs, which can serve as another building block for our employees' wealth accumulation.

## 5.8 Social and Local Commitment

Through our 'Volunteering at GASCADE' program, we are establishing a strong foundation for embedding social sustainability into our corporate culture. Employees have the opportunity to spend half a working day a year getting involved in a selected social or environmental project. GASCADE is responsible for selecting the projects and organizing the assignments. Employees can use an online booking portal to choose a date that suits them.

GASCADE keeps cooperating with the Kasseler Tafel, the local food bank. In view of the sharp rise in the cost of living in recent years, many people do not have enough money to provide for themselves and their families. The Kasseler Tafel supports these people in the region with food. Helping hands are constantly needed for the daily sorting, repackaging, and distribution of the donated goods. These tasks do not require extensive training and are therefore ideal for the short-term, effective involvement of individual employees. In the second half of 2024 and early 2025, colleagues were again involved in sorting and collecting goods. For the second year in a row, GASCADE employees purchased and donated around 1,000 advent calendars from supermarkets in the region, which the food bank in Kassel distributes to children in need during the christmas season.





The 'Clean environment at GASCADE and NEL' campaign was the brainchild of an employee who was completing her internal internship in the sustainability department. The aim of the initiative is to clear the grounds and surroundings of the company headquarters of garbage and thus contribute to a clean environment. As part of the campaign, volunteers come together once a month during their lunch break to clean up litter using grabbers and bin bags. The collected waste is disposed of in the residual waste container on the company premises. The first collection walks took place at the beginning of 2025 and are communicated via an internal calendar. We would like to get more employees involved in the campaign over the course of the current year to raise awareness of waste avoidance and disposal.





### Donations and sponsorship

In 2024, our transport companies donated a total of 63,612 euros to charitable causes and non-profit organizations. We are delighted that we were able to increase our donations by more than 55% compared to the previous year. Once again, the largest individual project was the Kassel Mini Marathon, with funding of approximately 34,000 euros.

As in previous years, GASCADE 2024 made it possible for many children and young people to participate in the mini marathon in Kassel. By providing 1,100 starting places, our company sponsors around a quarter of all entries in the mini marathon. As a result, many young people were

once again able to take part in the race which would have been much more difficult without the sponsorship. Thus, the donation contributes to social cohesion and team spirit among schoolchildren through joint sport.

The other individual measures include, for example, projects by fire departments and cultural associations, educational institutions, and sports clubs.

As part of our annual Christmas donation organized by the works council, our employees donated generously, which the management topped up to 5,000 euros. The donated amount will support the

Panama day shelter which provides assistance to homeless and disadvantaged people in Kassel. The association Soziale Hilfe e.V., which runs the Panama, would like to use the money to modernize the sanitary facilities and build a ramp for barrier-free access - an important step towards making access easier for everyone. The Panama is an important point of contact for people in need, as the wide range of assistance offered by the facility makes their lives a little easier.





## 6 GOVERNANCE



### 6.1 Sustainability Management

GRI 2-13

The regular review and analysis of material topics, identification, and management of sustainability measures, compliance with reporting obligations, and publication of an annual sustainability report are managed centrally by the business development and sustainability department. Our declared objective is to strengthen our sustainability efforts across all business areas and to initiate new projects.

Our board management is informed about our sustainability activities at regular intervals and is in-

involved in the decision-making process regarding future measures and projects. The sustainability team presents proposed targets to executive management, who make the final decisions. The supervisory bodies of the transport companies, like the central steering bodies, are informed about all sustainability measures and targets at least every six months at their regular meetings. Close coordination with SEFE Securing Energy for Europe GmbH also takes place in the context of group reporting. It goes without saying that the unbundling requirements of the Energy Industry Act are complied with. Digital data collection solutions are crucial for promoting sustainability as they enable the precise collection and analysis of environmental and resource data, which helps companies and organizations make informed decisions to reduce their environmental footprint. In addition, these technologies improve the transparency and traceability of sustainability measures, strengthen stakeholder confidence, and pave the way for a more sustainable future. In 2025, we would therefore like to intensify our work on an IT solution to centralize the database for reporting as well.





## 6.2 Compliance and Business Ethics

GRI 2-23, 2-24, 2-26, 2-27

Compliance is crucial for protecting the company, building trust, and maintaining its reputation. Business conduct in accordance with all applicable laws, regulations, internal rules, and ethical as well as moral principles is summarized under the term compliance. Compliance is a key component of the sustainable value orientation of our transport companies and provides us with guidance in our day-to-day work.

Our compliance management system includes a comprehensive program that promotes consistent values and proper conduct, thereby protecting our companies from potential harm.

All managers and employees are given mandatory training to help them internalize our Code of Conduct and apply it in their daily work. This training takes place within the first six months of joining the company and is refreshed every three years.

Regular audits monitor and confirm the quality and efficiency of our compliance program.

Our employees from the legal and risk management department are available to answer any questions or uncertainties. Adherence to our compliance requirements, guidelines, and regulations is an important concern for the management board. We take our social responsibility seriously and ex-

pect the same from our business partners and service providers. In this regard, we rely on our internal business partner compliance program.

Our compliance program aims to prevent and identify potential risks at an early stage to quickly limit or eliminate dangers. This includes structured data protection management, which is integrated into our program.

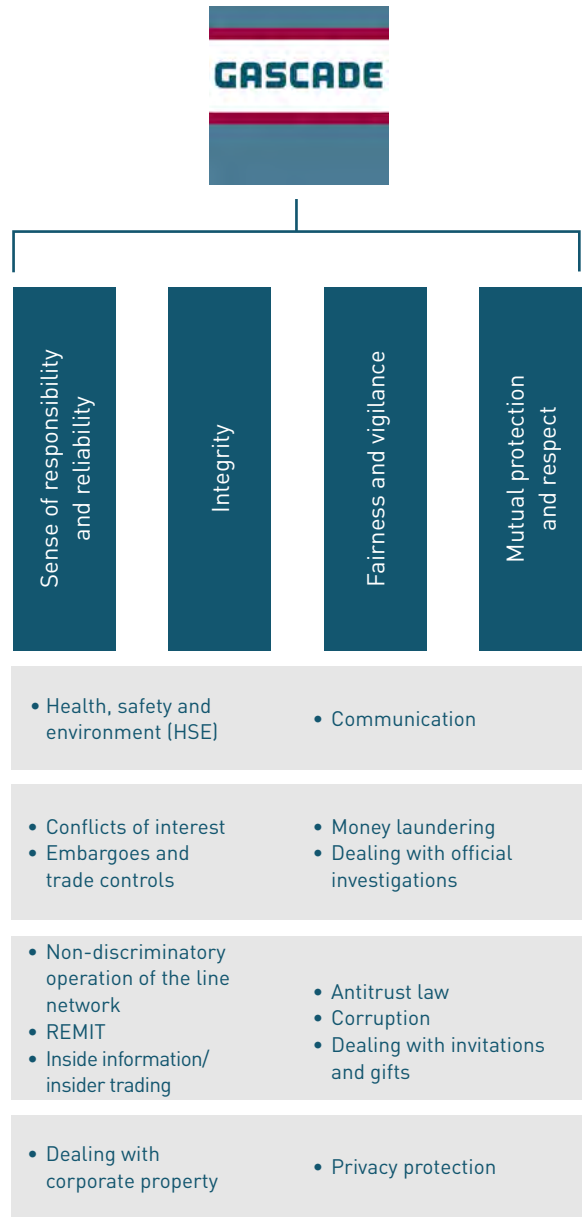
The Code of Conduct forms a central interface between the sustainability values and goals of our companies, our employees, and the desired behavior of third parties. It is a central component of our business activities in dealing with people, the environment, assets, information, and business partners.

We expect the same standards from our business partners and do not tolerate any direct or indirect corruption or influence peddling.

You can find our code of conduct for suppliers here: [GASCADE Gastransport: suppliers](#)

Our established whistleblower protection system allows for the secure and anonymous reporting of violations within the company, without the risk of personal repercussions.

The system guarantees full data protection and anonymity.





### 6.3 IT Security

#### GRI 2-27

Our TSOs are classified as critical infrastructures (KRITIS) in Germany in accordance with section 2 of the Ordinance on the Identification of Critical Infrastructures under the BSI (Federal Office for Information Security) Act.

Protecting our network infrastructure from external threats is a key concern. Our cyber security team is working hard to further develop security measures and raise employees' awareness of IT security. As one of the largest TSOs in Germany and Europe, we have a particular responsibility in information security.

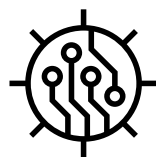
At the end of 2024, a new BDEW expert committee 'Security, Resilience, and Critical Infrastructures' was established to deal with the security and resilience of critical infrastructures in the energy and water industry. GASCADE will take over the chairmanship from 2025.

In total, our employees detected and processed more than 10,000 security incidents in the reporting year. The number of external scans and attempted attacks amounted to over 3.5 million, carried out by a large number of potential attackers. Despite the ongoing tense IT security situation, there were no reportable incidents and no business interruptions

as a result of IT security breaches - proof of the effectiveness of our protective measures.

As part of our ongoing awareness and phishing campaigns, over 3,300 emails were sent to our employees in 2024. The average detection rate was over 93%. In addition, 585 employees took part in IT security training - with a very high completion rate of 99.3%. This means that we continue to maintain a consistently high level of awareness.

To further strengthen information security, GASCADE analyzed 113 generic risk scenarios across around 85 asset groups as part of the information security management system (ISMS) and assessed over 1,100 risks. In addition, internal ISMS audits and technical security checks were carried out to ensure the integrity of our systems. In the area of supplier management, 34 suppliers and service providers were reviewed, and five on-site audits were carried out..



### 6.4 Digitalization

#### Digitalization at GASCADE

A lot has happened at GASCADE since the introduction of our digital transformation strategy at the beginning of 2024. As a long-standing priority for our

company, digitalization has been further elevated through the targeted strategy we have put in place. The internal analysis underlying the strategy, which we presented in our previous sustainability report, identified four key areas for action: Innovation, processes and automation, skills and learning, and organization and culture.

#### Innovations

In the area of innovation, the aim is to use new technologies such as artificial intelligence sensibly and maximize their benefits. In 2024, our employees successfully tested an internal AI-based chatbot which is now being used throughout the company. In addition, the open test phase for an internal AI-based intelligent search engine was completed. Corresponding training courses support its use within the company. Practical testing of technologies such as 3D printers is underway to enhance our ability to respond to requirements with greater speed and flexibility.

#### Processes and automation

In the area of processes and automation, we focus on continuous automation and the efficient processing of large volumes of data to create added value for our company and a safe transportation of gas. Projects such as energy data management and the deployment of a central HSE management system are well advanced and nearing implementation. Initial tests in the area of the Internet of



Things (IoT) were completed to test new sensor technology and transmission options. As part of the Microsoft Power Platform, initial initiatives were launched to streamline and automate business processes. In addition, our employees developed and improved apps, for example for organizing and carrying out maintenance measures and tasks in the pipeline network.

### Skills and learning

In the area of skills and learning, we are actively shaping the digital transformation by developing the necessary skills across the board. Our employees receive targeted training in digital skills but also in other specialist areas such as hydrogen. We are continuously working towards an open error culture that supports sustainable learning. Central learning opportunities are to be created to support the acquisition of skills by employees. A learning management system (LMS) working group was formed for this purpose. In 2024, an overview of the complex applications of Microsoft 365 was developed and made available. Based on this, tips and tricks for their use are communicated on an ongoing basis. Training courses are being developed and are planned for the first half of 2025.

### Organization and culture

To effectively engage with digital transformation, we ensure ongoing organizational and cultural development in response to changing demands. To

this end, a central unit has been set up in the application and digitalization department as a point of contact for the topic of digitalization. Among other things, this ensures that all employees are informed about measures, can implement them, and can provide feedback on their design and improvement. Since May 2024, there has been a regular exchange with the digital partners of all departments in the format of the 'Round Table: Digitalization'. The digital partners play an important role in the digital transformation at GASCADE. Their main task is to act as a link between the specialist departments and IT to facilitate effective communication and collaboration. A social networking platform for internal use has been available since December 2024 and is intended to contribute to the rapid transfer of knowledge and togetherness in our growing company.

Through these measures and projects, we reaffirm our dedication to advancing digital transformation at GASCADE and to fostering ongoing improvement in our processes and capabilities through innovation. In addition to the initiatives mentioned, there are many other projects and measures throughout GASCADE IT that are continuously driving digital change.



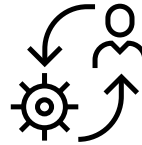


### 6.5 Sustainable Procurement

Compliance with HSE standards is a top priority for us - not only in our own operating processes but along the entire supply chain. Our aim is to procure products and services that meet our business requirements as well as social and environmental standards.

To ensure this, we have established suitable guidelines and standards. They are designed to ensure that our suppliers and partners act responsibly. In addition to a comprehensive code of conduct for suppliers, we have a specific HSE guideline for contractors that clearly defines our requirements for the protection of people and the environment. We implement the extensive requirements of sector procurement law and thus also contribute to the sustainability of procurement.

We only work with suppliers who comply with environmental, social, and labor standards. Transparency and regular audits ensure that these standards are reviewed, particularly in the area of HSE.



### 6.6 Management Systems

GASCADE and NGT successfully apply various certified management systems, enabling us to efficiently master complex, cross-divisional management and to control tasks. Clearly defined roles, rules, and processes are used to systematically supervise issues such as quality, IT security, energy efficiency, knowledge, and occupational safety.

#### 6.6.1 Energy Management

We have implemented an energy management system (EnMS) that is operated and continuously improved in accordance with the requirements of DIN EN ISO 50001:2018. The aim is to optimize our energy consumption through energy efficiency and resource conservation.



#### 6.6.2 Information Security

We have maintained certifications in accordance with ISO/IEC 27001:2022 and the IT security catalog pursuant to section 11 (1a) of the Energy Industry Act. The surveillance audits at GASCADE and NGT were successfully completed and underscore our long-standing commitment to information security.



### 6.6.3 Quality Management

We take responsibility for our transport customers, business partners, employees, and the environment. As a transmission system operator, we always have to provide our service in the best possible quality. To support this, we have established corporate processes within a quality management system (QMS) that ensures compliance with technical standards and regulations. The digitalization of these processes plays a key role in enhancing both efficiency and transparency. Regular internal and external audits monitor adherence to these standards, and GASCADE is certified in accordance with DIN EN ISO 9001.



### 6.6.4 Environmental Management

In 2023, we decided to establish an environmental management system in accordance with DIN EN ISO 14001. Beyond legal requirements, systematic environmental management offers real added value: it helps us to record, evaluate, and continu-

ously improve environmental aspects not only on a project-by-project basis, but across the entire company.

Our environmental management system lays the foundation for effectively putting the principles of our HSE guidelines into practice. In doing so, we rely on the proven 'Plan-Do-Check-Act' cycle – a core element valued across all our management systems. The aim is to effectively introduce and maintain environmental measures.

Based on legal obligations and the requirements of relevant stakeholders, we focus on measures in the following areas:

- Resource conservation and environmental compatibility during the construction and operation of our pipeline network
- Strengthening measures for the fundamental avoidance, reprocessing, reuse, recycling, and proper utilization of waste
- Safe handling of chemicals and hazardous substances with the aim of reducing individual hazardous and operating materials as much as possible
- Raising awareness among our employees on the topic of environmental management, including internal communication measures

In 2024, our focus was on planning and launching our environmental management system. During this time, our employees developed the expertise needed to ensure its long-term success and sustainability. Additionally, they identified and evaluated relevant environmental aspects. In an interdepartmental workshop, our employees laid the foundation for better integration of our environmental data to ensure its continuous monitoring and evaluation. The goal is to fully implement the environmental management system by the end of 2025 and have it certified according to ISO 14001.

## 7 HYDROGEN AND THE FUTURE OF ENERGY

### 7.1 Hydrogen Transport: Enabling the Market Ramp-Up

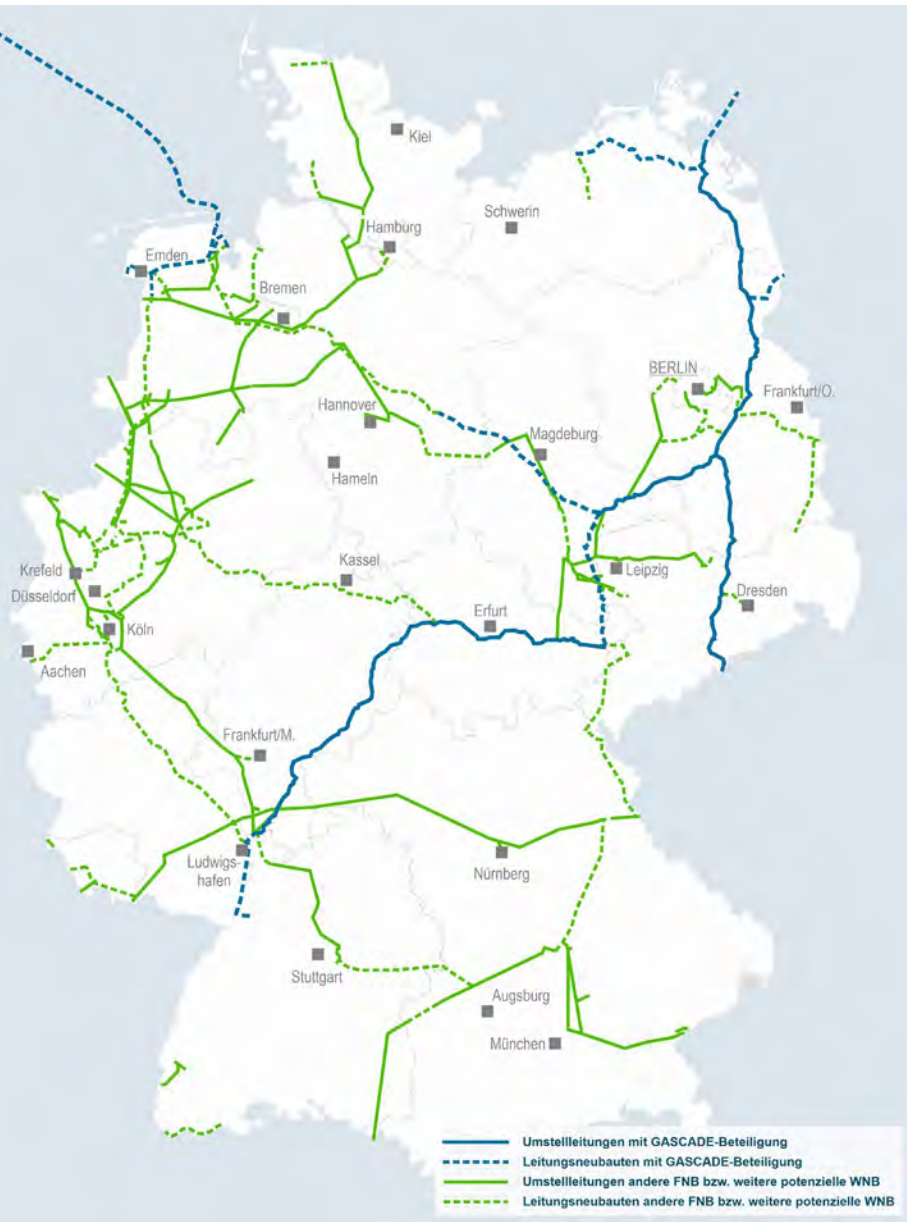
As a flexible energy carrier derived from renewable sources, hydrogen plays a key role in driving the sustainable energy transition and achieving climate targets — particularly in sectors and industrial processes where full decarbonization is not yet feasible, such as in the iron and steel production or in the chemical industry. The reliable and flexible availability of renewable energy remains one of the greatest challenges for a stable energy supply. In this context, hydrogen can serve as an energy storage medium and reduce the need for repeated and extensive curtailment of solar and wind power to stabilize the electricity grid.





Hydrogen has been an integral part of industrial processes for many years, including the production of ammonia and in the processing of crude oil products. A large share of the hydrogen currently in use is supplied locally and on a selective basis, for example via truck deliveries. In order for hydrogen to be used across the board and for a successful energy transition, existing pipelines need to be converted and the existing infrastructure made even more efficient. Finally, producers and import points must be connected with consumption centers, and new and existing gas infrastructure needs to be linked throughout Europe. This is where GASCADE is seizing the opportunity to contribute to the new energy future through its pipeline network and hydrogen projects — and has already taken the essential steps in that direction.





## 7.2 The Hydrogen Core Network

Strategic planning is essential for building a supra-regional hydrogen transport network, given the long-term nature of major investments and the upfront commitments made by TSOs such as GASCADE in developing the necessary infrastructure. A milestone in this respect is the formal approval of the hydrogen core network by the German Federal Network Agency in October 2024.

The core network is designed to create an initial framework for important transport pipelines for the large-scale supply of hydrogen in Germany and Europe. The planning of this network is based on the regulation that the Energy Industry Act provides. The Association of Gas TSOs, of which GASCADE is a member, was asked to submit a draft of the core network. On 22 October 2024, the German Federal Network Agency approved the TSOs' core network application with 9,040 kilometers of hydrogen pipelines, which are to be repurposed and newly built between 2025 and 2032.

The hydrogen core network is financed by the operators of the hydrogen core network. A corresponding concept has been developed by the German government and enshrined in law in the Energy Industry Act. This concept is intended to prevent the hydrogen ramp-up from being jeopardized by very high fees in the first few years and therefore provides for

a cap on grid fees for hydrogen consumers. A so-called amortization account bridges the difference between the necessary grid fee and the grid fee set by the Federal Network Agency by making annual compensation payments. The amortization account is settled in later years. KfW (Kreditanstalt für Wiederaufbau), a German state-owned investment and development bank, finances the amortization account with a credit line of 24 billion euros.

Around 60 percent of the approved core network kilometers consist of natural gas pipelines that are to be repurposed. Leveraging existing infrastructure enables time and resource savings while minimizing avoidable impacts on the environment. GASCADE has already been working for several years on hydrogen projects such as AquaDuctus and the Flow - making hydrogen happen program, which are now part of this core network. Our company will thus implement 22 percent of the approved core network and provide the market with central hydrogen import routes in the North Sea and Baltic Sea regions as well as with domestic hydrogen interconnectors in Germany.



### 7.3 Hydrogen Projects of our Transport Companies

#### AquaDuctus

As part of the AquaDuctus project, a gigawatt-scale hydrogen pipeline with a transport capacity of up to 20 GW will be built to serve as a central import route for hydrogen volumes from the North Sea region to Germany. The AquaDuctus project consists of an offshore section in the German Exclusive Economic Zone (EEZ) of the North Sea and an onshore section for integration into the downstream onshore hydrogen pipeline network to the German Dutch border. Starting in 2030, the pipeline will offer grid users open, non-discriminatory grid access (e.g. for the production of green hydrogen from offshore wind turbines or for the import of hydrogen from European and non-European countries bordering the North Sea). The project connects large offshore hydrogen wind farms in the North Sea with the European mainland and the emerging hydrogen infrastructure on land. AquaDuctus will form the core of a new offshore infrastructure connecting Germany with the other countries bordering the North Sea.

AquaDuctus is based on a scalable, demand-oriented infrastructure in two sections:

First, AquaDuctus will connect the first large hydrogen wind farm site SEN-1 (Area used for other energy production) with a generation capacity of around one GW. SEN-1 is located in the German

EEZ northwest of the island of Heligoland. The 200-kilometer-long offshore pipeline will transport green hydrogen generated from offshore wind power to the German mainland and from there via a 100-kilometer-long onshore pipeline to Bunde. In the second section, the offshore pipeline is planned to be extended by a further 200 kilometers to the German sea border. AquaDuctus will then extend to the tip of the so-called 'Entenschnabel' (duckbill) in the German EEZ, creating the opportunity to connect additional offshore hydrogen wind farm sites and link up with neighboring hydrogen infrastructures from Norway, Denmark, the Netherlands, Belgium, or the United Kingdom. This opens the door for grid-connected offshore hydrogen transportation across Europe. The UK has already expressed that a pipeline connection to Germany is a high priority.

The European Commission confirmed the status of a 'Project of Common Interest' (PCI) for AquaDuctus in 2023. In February 2024, the European Commission recognized the project as an 'Important Project of Common European Interest' (IPCEI) as part of the Hy2Infra wave, which includes 23 German hydrogen projects spanning production, transport, and storage stages of the value chain. AquaDuctus is publicly funded by the German Federal Ministry for Economic Affairs and Energy. The public funding of AquaDuctus, in line with the National Hydrogen Strategy, is intended to ensure the swift implemen-

tation of the project and accelerate the hydrogen market ramp-up.

AquaDuctus is a part of the hydrogen core network confirmed by the Federal Network Agency in October 2024, which creates additional investment security.

AquaDuctus continues to take shape through cooperation between partners neighboring the North Sea. In spring 2025, the TSOs National Gas and GASCADE signed a letter of intent to develop a hydrogen value chain between the UK and Germany and a project of mutual interest (PMI). The primary objective is to establish an offshore hydrogen interconnector pipeline between the UK and Germany, integrating GASCADE's AquaDuctus pipeline.



### Flow - making hydrogen happen

With the 'Flow - making hydrogen happen' program, GASCADE is aiming to rapidly establish an efficient transport corridor for climate-neutral hydrogen together with partners from all stages of the value chain. This will take place in multiple stages. By the end of 2029, hydrogen will be transported from the Baltic Sea coast to Baden-Württemberg, connecting at least nine industrial sites along the way. Hydrogen is to be produced in the Lubmin area on the Baltic coast, in the greater Rostock area, and by producers along the pipeline. Imports are possible via the ports in Lubmin, Rostock, and, in the long term, via a connection with the Baltic Sea Hydrogen Collector (BHC), which will bring hydrogen from various countries bordering the Baltic Sea to Germany. The BHC is an ambitious offshore hydrogen project to connect Finland, Sweden, and Germany. The project is being developed by the Finnish and Swedish transmission system operators Gasgrid Finland Oy and Nordion Energi AB together with the renewable infrastructure developer Copenhagen Infrastructure Partners from Denmark. GASCADE collaborates with the partners of the BHC project to establish the connection between the BHC and the

approved core network.

From 2030 onward, the international rollout of the 'Flow - Making Hydrogen Happen' initiative will begin, with cross-border connections to Poland and the Czech Republic already in planning. As an important cooperation project for Central Europe, GASCADE is planning the Czech German Hydrogen Interconnector (CGHI) together with the Czech network operator NET4GAS and Open Grid Europe from Germany. The Flow route from the Baltic Sea to the Czech Republic and Poland, along with the BHC, have been recognized as a PCI by the European Commission since the end of 2023.

Extensions to Bavaria, Austria, Switzerland, France, Denmark, and the north-west are possible in the future and are being finalized together with other network operators. The internationally oriented program is designed for an hourly output of up to 20 GW in the final stage. GASCADE has the necessary network structure to enable such an expansion and is committed to the cooperative development of the market along the transport routes for hydrogen. The resilience of the emerging hydrogen infrastructure will be ensured by connecting it to storage facilities in Brandenburg, Saxony-Anhalt, and Hesse, as well as by diversifying transport routes.

In 2024, the project partners achieved key milestones in implementation. A major step followed

**Flow** making  
hydrogen  
happen



in October when GASCADE decided to invest in the northern section of the 'Flow – Making Hydrogen Happen' program. The world's first filling of a pipeline with a diameter of 1.4 meters with hydrogen will start in February 2025 with the aim of making the first large pipeline section available for large-volume hydrogen transports by the end of 2025. GASCADE is thus quickly and consistently repurposing existing pipelines.

The 'Pomeranian Green Hydrogen Cluster Project' is gaining momentum, with collaboration taking shape between GAZ-SYSTEM, the Polish grid operator, and Servivon (PNE Group), a wind farm developer. As part of the cooperation, feasibility studies will be carried out to investigate both the potential of green hydrogen production in the Western Pomerania region and the optimal connection of the German and the yet-to-be-built Polish hydrogen network in order to exchange green hydrogen. The feasibility studies are funded by the European Commission as part of the 'Connecting Europe Facility (CEF)' program.

By repurposing the majority of its existing infrastructure for hydrogen transport, GASCADE is laying the foundation for a climate-neutral hydrogen economy. This enables the connection of production capacities and imports in northern Europe with hydrogen storage sites along the pipelines and the consumption centers in eastern and southern

Germany. The switch from natural gas to hydrogen will lead to significant CO<sub>2</sub> savings in the steel, chemical, and cement industries, other energy-intensive sectors, the mobility sector, and the heating market. Integration into the European internal hydrogen market increases security of supply and creates a market with numerous producers, traders, and customers at an early stage.

#### 7.4 European Cooperation on Hydrogen

GASCADE collaborates with other European transmission system operators to advance the coordinated development of a hydrogen network that extends beyond existing projects. Particular emphasis is placed on developing the offshore sector in alignment with the onshore hydrogen supply networks. One example of such cooperation is HyNOS - Hydrogen Networks for the Northern Seas.

Since 2024, employees of TSOs from Belgium, Denmark, France, Germany, Ireland, the Netherlands, Norway, and the United Kingdom have been meeting regularly to discuss interface issues. Current efforts are focused on preparations for the upcoming North Sea Summit, which aims to position the North Sea as Europe's leading hub for green energy. At the last North Sea Summit in 2023 in Ostend, Belgium, the North Sea states agreed on the comprehensive expansion of offshore wind energy of 300 GW by 2050.



Maximizing the potential of offshore wind energy requires the combined production of electricity and hydrogen as well as the seamless integration of long-distance transmission networks both onshore and offshore.

Based on this, HyNOS develops sound policy recommendations and communicates them to relevant decision-makers in the form of expert papers to support informed and effective policy decisions. The aim is to promote offshore wind energy through the integrated generation of electricity and hydrogen in the North Sea, to maximize the potential of offshore wind energy and to reduce overall transport costs. AquaDuctus thus offers the potential to establish connections with our neighbors in the North Sea. These connections require cooperation between the North Sea countries beyond individual projects.

In 2024, GASCADE signed a cooperation agreement with eight other network operators for the Baltic Sea to jointly develop projects for the transportation of climate-neutral hydrogen. This presents promising opportunities to promote the integration of the European energy market while simultaneously strengthening its independence and resilience.

# 8 GLOBAL REPORTING INITIATIVE (GRI)-INDEX

**Declaration of Application**

GASCADE Gastransport GmbH has reported in accordance with the GRI Standards for the period 01.01.2024-31.12.2024  
GRI 1 applied  
GRI 1: Foundation 2021  
Applicable GRI sector standard  
GRI 11: Oil and Gas Sector 2021

GRI Standard/ Other source	Specification	Location	Omission			Pages
			Requirement(s) Omission	Reason	Explanation	
GRI 2: General Disclosures 2021	2-1 Organizational details	2.1, 2.2				p. 5
	2-2 Entities included in the organization’s sustainability reporting	2.1				p. 5
	2-3 Reporting period, reporting frequency and contact point	2.1				p. 5
	2-4 Restatements of information	2.1				p. 5
	2-5 External assurance	2.1				p. 5
	2-6 Activities, value chain and other business relationships	2.1				p. 5
	2-7 Employees	5.2				p. 32
	2-8 Workers who are not employees	5.2				p. 32
	2-9 Governance structure and composition	2.2				p. 7

GRI Standard/ Other source	Specification	Location	Omission			Pages
			Requirement(s) Omission	Reason	Explanation	
	2-10 Nomination and selection of the highest governance body	2.2				p. 7
	2-11 Chair of the highest governance body	2.2				p. 7
	2-12 Role of the highest governance body in overseeing the management of impacts	2.2				p. 7
	2-13 Delegation of responsibility for managing impacts	6.1				p. 42
	2-14 Role of the highest governance body in sustainability reporting	2.1				p. 5
	2-15 Conflicts of interest		not specified	Restrictions due to a duty of confidentiality	We treat information on the employment relationships of our supervisory bodies confidentially	
	2-16 Communication of critical concerns		not specified	Restrictions due to a duty of confidentiality	We treat information on the working methods of our control bodies confidentially	

GRI Standard/ Other source	Specification	Location	Omission			Pages
			Requirement(s) Omission	Reason	Explanation	
	2-17 Collective knowledge of the highest governance body		not specified	Restrictions due to a duty of confidentiality	We treat information on the personal training and further education of our supervisory bodies confidentially	
	2-18 Evaluation of the performance of the highest governance body		not specified	Restrictions due to a duty of confidentiality	We treat information on the performance evaluation of our supervisory bodies confidentially	
	2-19 Remuneration policies		not specified	Restrictions due to a duty of confidentiality	We treat information on the remuneration of our control bodies confidentially	
	2-20 Process to determine remuneration		not specified	Restrictions due to a duty of confidentiality	We treat information on the remuneration of our control bodies confidentially	
	2-21 Annual total compensation ratio		not specified	Restrictions due to a duty of confidentiality	We treat information on the remuneration of our employees confidentially	
	2-22 Statement on sustainable development strategy	1, 3.5				p. 4, p. 17, p. 20



GRI Standard/ Other source	Specification	Location	Omission			Pages
			Requirement(s) Omission	Reason	Explanation	
	2-23 Policy commitments	6.2				p. 43
	2-24 Embedding policy commitments	6.2				p. 43
	2-25 Process to remediate negative impacts	2.4				p. 9
	2-26 Mechanisms for seeking advice and raising concerns	6.2				p. 43
	2-27 Compliance with laws and regulations	6.2, 6.3				p. 43, p. 47
	2-28 Membership associations	2.3				p. 7
	2-29 Approach to stakeholder engagement	3.4				p. 12
	2-30 Collective bargaining agreements	5.3				p. 33
Material topics						
GRI 3: Material topics 2021	3-1 Process to determine material topics	3.3				p. 12, p. 15
	3-2 List of material topics	3.3				p. 12
Material topics (GRI 11: Oil and Gas Sector 2021)						
11.1 GHG emissions						
GRI 3: Material topics 2021	3-3 Management of material topics	3.3				p. 12

GRI Standard/ Other source	Specification	Location	Omission			Pages
			Requirement(s) Omission	Reason	Explanation	
GRI 302: Energy 2016	302-1 Energy consumption within the organization	4.2				p. 25
	302-2 Energy consumption outside the organization		not specified	Information unavailable / incomplete	Information is currently being collected in a project to record Scope 3 emissions. We cannot foresee an exact date for the first publication.	
	302-3 Energy intensity	4.2.1				p. 25
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	4.1.1				p. 21
	305-2 Energy indirect (Scope 2) GHG emissions	4.1.2				p. 22
	305-3 Other indirect (Scope 3) GHG emissions					
	305-4 GHG emissions intensity	4.1.2				p. 22
11.2 Climate-related adaptation, resilience and transition to a low-emission economy						
GRI 3: Material topics 2021	3-3 Management of material topics	3.3				p. 12
GRI 201: Economic performance 2016	201-2 Financial implications and other risks and opportunities due to climate change	3.4	incomplete information	Information unavailable / incomplete	Information is currently being collected in a project to record Scope 3 emissions. We cannot foresee an exact date for the first publication.	p. 14

GRI Standard/ Other source	Specification	Location	Omission			Pages
			Requirement(s) Omission	Reason	Explanation	
GRI 305: Emissions 2016	305-5 Reduction of GHG emissions	3.6				p. 20



Topics from the applicable GRI sector standards that were not classified as material

Topic	Explanation
<b>GRI 11: Oil and gas sector 2021</b>	
11.3 Air emissions	Topic is currently classified as non-material, as we currently classify the severity of the negative impacts as not significant. The severity is to be prioritized lower compared to the other emissions. However, we will continuously assess the topic and present the most important aspects in our report.
11.4 Biodiversity	The topic is currently classified as non-material, as we currently classify the materiality of the negative impacts as not material. The severity is to be prioritized lower compared to the material topics. However, we will continuously assess the topic and present the most important aspects in our report.
11.5 Waste	The topic is classified as non-material as we do not consider the significance of the negative impacts to be material. The severity is to be prioritized lower compared to the material topics. However, we will continuously assess the topic and present the most important aspects in our report.
11.6 Water and wastewater	The topic is classified as non-material, as we do not consider the materiality of the negative impacts to be significant. The severity is to be prioritized lower compared to the material topics. However, we will continuously assess the topic and present the most important aspects in our report.
11.7 Decommissioning and remediation	We currently consider the probability of occurrence of a negative impact to be low, which is why we currently classify the issue as non-material. We assume that we will continue to use our infrastructure for the transportation of climate-neutral gases in the future.
11.8 Asset integrity and critical incident management	We currently consider the probability of occurrence of a negative impact to be low, which is why we currently classify the issue as non-material. However, we will continuously evaluate our management of critical incidents.
11.9 Occupational health and safety	The topic has been classified as material for our business activities since this reporting year. We already comply with many of the requirements of GRI 11.9, but we are currently still working on systematically capturing all reporting obligations.
11.10 Employment practices	The topic is classified as non-material as there is no materiality.

Topic	Explanation
11.11 Non-discrimination and equal opportunity	The topic is classified as non-material because it is not material.
11.12 Forced labor and modern slavery	Not applicable as not compatible with the regulatory framework in Germany.
11.13 Freedom of association and collective bargaining	The topic is classified as non-material as there is no materiality.
11.14 Economic impacts	The topic is classified as non-material because it is not material. In the definition of GRI 11.14, the economic impact on a local community must be significant, which we do not consider to be the case for our business activities.
11.15 Local communities	The topic is classified as non-material in its own right, as it is not material. In the definition of GRI 11.15, the impact on a local community must be significant, which we do not consider to be the case for our business activities.
11.16 Land and resource rights	Not applicable, as not compatible with the regulatory framework in Germany.
11.17 Rights of indigenous peoples	Not applicable, as we operate exclusively in Germany.
11.18 Conflict and security	Non-material topic, as we consider the probability of occurrence in Germany to be low.
11.19 Anti-competitive behavior	Not applicable as we are regulated transportation companies.
11.20 Anti-corruption	Not applicable as we are regulated transportation companies.
11.21 Payments to governments	Not applicable as we are regulated transportation companies.
11.22 Public policy	Non-material topic, as we have not identified any significant impact from our political influence.

# LIST OF ABBREVIATIONS

%	percent
AI	Artificial Intelligence
BDEW	German Association of Energy and Water Industries e.V.
BHC	Baltic Sea Hydrogen Collector
BImSchV	Federal Immission Control Act
BSI	Federal Office for Information Security
CEF	Connecting Europe Facility
CGHI	Czech German Hydrogen Interconnector
CH <sub>4</sub>	Methane
CO	Carbon monoxide
CO <sub>2</sub>	Carbon dioxide
CO <sub>2</sub> e	Carbon dioxide equivalents
CS	Compressor station
CSRD	Corporate Sustainability Reporting Directive
DEHst	German Emissions Trading Authority
EEZ	Exclusive Economic Zone
EnMS	Energy management system
ENNOH	European Network of Network Operators for Hydrogen
ENTSOG	European Network of Transmission System Operators for Gas
ESG	Environment, Social, Governance
ESRS	European Sustainability Reporting Standards
ETF	Exchange Traded Fund
EUGAL	Europäische Gas Anbindungsleitung
GHG	Greenhouse gas
GRI	Global Reporting Initiative
GW	gigawatt
GWP	Global warming potential
ha	hectare

HR	Human resources
HSE	Health, Safety, and Environment
HyNOS	Hydrogen Networks for the Northern Seas
IG BCE	Mining, Chemical, and Energy Industrial Union
IMEO	International Methane Emission Observatory
IoT	Internet of Things
IPCEI	Important Project of Common European Interest
ISMS	Information Security Management System
IT	Information Technology
KfW	Kreditanstalt für Wiederaufbau
KPI	Key performance indicator
KRITIS	Critical infrastructure
kWh	kilowatt hour
kWh/a	kilowatt hour per year
LMS	Learning management system
MWh	megawatt hour
NEL	Nordeuropäische Erdgasleitung
NOx	Nitrogen oxides
OHM	Occupational health management
OPAL	Ostsee-Pipeline-Anbindungsleitung
PCI	Project of Common Interest
PMI	Project of mutual interest
PRMS	Pressure regulating and metering station
QMS	Quality management system
SEN	Area used for other energy production
t	tons
tCO <sub>2</sub> e	tons of carbon dioxide equivalents
TSO	Transmission System Operators
UNEP	United Nations Environment Programme
WGTH	W & G Transport Holding GmbH

## DISCLAIMER

This report contains forward-looking statements that are based on current assumptions and information available at the time of preparation. Factors that cannot be foreseen today may have a lasting effect on these forecasts and cause actual developments to deviate from the estimates given here. We therefore accept no responsibility for the accuracy of these statements. GASCADE and NGT assume no obligation to update the forward-looking statements contained in this report beyond the statutory requirements or to adapt them to future events or developments.



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