

# Annexes

## Annex I: Terminology

CH <sub>4</sub>	Methane, the most important component of natural gas.
CO	Carbon monoxide (released upon incomplete combustion of fuels).
CO <sub>2</sub>	Carbon dioxide or carbonic acid gas (released upon complete combustion of fuels).
CO <sub>2</sub> -equivalent emissions	A measure of the enhanced greenhouse effect, whereby emissions of CO <sub>2</sub> and CH <sub>4</sub> are converted into 'CO <sub>2</sub> -equivalent emissions', on the basis of the Global Warming Potential (GWP) of the emissions. The GWP for CO <sub>2</sub> is set at 1 and the GWP for CH <sub>4</sub> at 23.
Collective defined contribution pension scheme	A pension scheme in which the employer makes available a certain percentage of its wage bill (or of the sum of pensionable salaries) in order to finance the costs of pensions for all employees.
ENTSO-G	ENTSO-G, the European Network of Transmission System Operators for Gas, aims to promote and facilitate cooperation between national transmission system operators (TSOs) in Europe.
Frequency index	A measure of safety performance: the number of accidents leading to absence per 100 employees.
Green gas	Biogas that has been upgraded to natural gas quality.
Greenhouse gases	Gases that contribute to the formation of an insulating layer around the earth, causing it to warm up. The most important greenhouse gases are water vapour, carbon dioxide, methane, nitrous oxide and chlorinated hydrocarbons.
HFCs	Hydrofluorocarbons, which are mainly used as refrigerants.
Hydrocarbons	A group of chemical compounds that consist of carbon and hydrogen.
IPPC guideline	The Integrated Pollution Prevention and Control (IPPC) guideline. This seeks to promote the integrated prevention and control of environmental pollution. The IPPC guideline obliges EU member states to regulate the emissions into water, air and soil (including measures for waste materials) of large companies and the intensive livestock industry.
ISO	International Standardisation Organisation, an organisation that establishes international standards.
LNG	Liquefied Natural Gas.
NO <sub>x</sub>	A generic term for nitrogen oxides, gases that are released during all combustion processes and which contribute to atmospheric acidification.
Odorant	An odour that for safety reasons is added to natural gas, which is itself inherently odourless.
Olympus	A registration system for registering compressor data.
Reportables	Accidents that are followed by absence, medical treatment, alternative employment or fatalities.
Wobbe Index	An indicator of the interchangeability of different gases on a certain burner. It is calculated by dividing the calorific value (or heating value) of the gas by the square root of the relative density of the gas.

## Annex II: Reporting principles

### Reporting policy

In this report we follow, as far as possible, the Transparency Criteria of the Dutch Ministry of Economic Affairs, Agriculture and Innovations. The report has been drawn up in accordance with the Criteria for 2014. The GRI guidelines have been applied at level C.

We report on the most relevant performance indicators that follow from our strategy. All aspects that directly affect the realisation of our strategy have been included in this report. These include indicators in the fields of finance, health, safety, the environment and sustainability. Wherever possible, the data with regard to the environment have been placed in a multi-year perspective in order to show long-term developments.

This report is intended for all our stakeholders, both internally and externally. For environmental reasons, it will only be published online, on our website; a printed version can be provided on request. Specific terminology used in this report is explained in Annex I: Terminology.

### Reporting process

In collecting the basic data for this report, both internal and external sources (such as manuals, management information systems and third-party data) were consulted. All departments bearing final responsibility for executing our key policy themes were also involved. For the most part, these departments were Safety, Finance, HR, Communications and Public Affairs, both in the Netherlands and Germany. The data they provided were consolidated internally, while the annual accounts were audited by an external expert. The report has been approved by the Executive Board.

### Coverage

This report covers Gasunie in the Netherlands, Gasunie in Germany, GTS, and participations such as BBL Company, in which, Gasunie has, in terms of capital provision, a majority shareholding of 60%. In so far as they are available, figures relating to these parts of our company have been included in the overall figures and results. With regard to matters relating to safety, health and the environment, the data recorded in the Netherlands and Germany differ somewhat. Whenever possible, data from the Netherlands and Germany have been combined. Where this was not possible, the data are presented separately. Participations in which we have a minority shareholding in terms of capital provision have not been included in the report. Our subsidiary GTS issues its own annual report, in which the specific results of the TSO are reported in more detail.

### Scope

This report gives an account of our efforts in the reporting year 2013, which runs from 1 January 2013 up to and including 31 December 2013. We report on our role as a transporter of natural gas, a supplier of related services in the gas value chain, and as owner and operator of the Dutch national gas transport grid. In this report, we describe our mission, strategy and the principal outcomes of our operational management, as well as sketching the most significant internal and external developments affecting that management. We indicate how we are responding to these developments. And since we take our responsibilities as part of the

supply chain seriously, we also clearly distinguish those activities that we carry out as part of good supply chain management. Finally, safety is a major priority for us, and we encourage safety awareness among our contractors. Given the importance of safety, this report also contains a summary of the safety performance of our contractors. Other performance data, such as those of suppliers, have not been taken into account.

### Verification

As required by law, our annual accounts have been audited by an external accountant (Ernst & Young Accountants LLP). Since Ernst & Young have not only audited our accounts but also verified our non-financial data in the field of Corporate Social responsibility, the auditor's letter and the assurance report have been combined in this annual report. This includes verification that the report complies with the GRI Guidelines, 3.1.

### Measuring and registration systems

The environment data of Gasunie in the Netherlands are generally measured and recorded as follows:

- ▶ The amount of waste removed is measured by waste collectors and processors. They register this on weighing slips, bills of lading, invoices, quarterly reports and annual overviews, all of which are passed on to us. The processing methodology they use is described in those documents. These annual overviews form the basis of the data reported by Gasunie.
- ▶ Possible soil pollution is recorded in soil inspection reports. The progress of investigations and any clean-up operations are registered centrally in a database, from which we extract data for this report.
- ▶ Data relating to the use of energy and water are derived from the overviews provided by the suppliers of energy and water at our principal locations. The data relating to the other locations are estimated, based on normal usage and/or third-party invoices.
- ▶ Air emissions are mainly registered by the Olympus computer system, developed for registering compressor data. Emissions of CO<sub>2</sub>, CH<sub>4</sub> and NO<sub>x</sub> are calculated on the basis of the fuel consumption of the machines, which is measured continuously. Each machine has its own emission characteristics, which have been registered in Olympus. The registration is corrected manually before and after operation of the compressors.
- ▶ Data on fugitive emissions are obtained from recent measurements, in accordance with the EPA21 method, and from historical research into the emissions at specific types of locations.
- ▶ HFC emissions are calculated on the basis of amounts (in kg) recorded in the logbooks at the various locations.
- ▶ All deviations from environmental standards are registered according to their cause in an internal database, from which the reported data are derived.
- ▶ Specifications of raw materials are based on purchasing data, with the exception of the usage of odorant, which is calculated.
- ▶ Specifications of nitrogen are based on purchasing data and on the data recorded at the Ommen and Kootstertille locations.

Environmental data relating to Gasunie in Germany have been collected in various ways. These include direct measurement (electricity, water consumption and emissions), indirect measurement (e.g., calculations of CO<sub>2</sub> and NO<sub>x</sub> and emissions of fuel gas), and registration (waste collection reported by external suppliers). All data have been entered into our environment database. This database is the source of all forms of environmental reporting. This includes our emissions trading, which is audited and certified each year by an independent third party.

### Management systems

Every year, our performance with regard to the main key performance indicators is assessed (including in internal and external audits). On the basis of the results of these assessments and audits, we determine whether our management systems are working properly and whether any adjustments are needed. We also decide whether it is necessary or desirable to sharpen or modify the focus of our policy and targets. We comply with all national and international legislation in so far as it applies to our company. In addition, we have set our own, more stringent requirements. This is because we believe it is important that our performance is based on clear standards and values. Our technical standards are specified in the Gasunie Technical Standards, and our safety, health and environment standards are specified in our Commitment to Safety, Health and Environment Policy. In our Code of Conduct, we explain how we expect our employees to behave with respect to integrity, safety and accountability. We have a whistle-blower policy (for reporting suspicions of improper conduct) and a counsellor has been appointed to deal with any reports. We have also set up a Complaints Committee to which employees can turn with any complaints, and counsellors are available for specific areas (e.g., bullying and harassment). Finally, we always make sure we handle with care any complaints that arise from the local communities in which we work. Our policy with regard to safety and the environment is ISO 14001-certified.

## Annex III: Product and supplier information

### Markets and customers

Our most important markets are the Netherlands and Germany. In addition, we serve as a transport hub, transporting gas to and from other countries. Our customers consist mainly of shippers, traders and directly connected parties (industries, regional network operators, private network operators, foreign network operators, gas producers, operators of gas storages and operators of LNG plants). More details are given in the annual report of GTS.

### Production factors

The most important products and services that enable us to deliver our services are the following:

- ▶ Building, managing and maintaining the pipeline network and installations
- ▶ The supply of materials for the purposes of building, managing and maintaining the pipeline network and equipment
- ▶ Fuel gas, electricity and nitrogen
- ▶ An IT network for efficiently planning the transport of gas
- ▶ Facility services and temporary staff.

### Origins of raw materials, materials, products and services

Most of what we buy comes from the European Union. Broken down into countries, 83% of our supplies come from the Netherlands, 10% from Germany, 6% from Belgium and 1% from the UK.

### Selecting suppliers

Before entering into a contract with a major new supplier, we investigate its integrity, its solvency and the composition of its customer portfolio (to ensure that it is not unduly dependent on only one or just a few customers).

In making our selection, we apply the legally obligatory Self-Assessment Form to check whether any circumstances exclude a supplier from accepting tenders (e.g., membership of a criminal organisation, bribery, fraud or money laundering). We regularly check suppliers on their safety and quality performance. In the event of persistent underperformance, we cease working with the supplier in question.

### Code of Conduct for Suppliers

We have drawn up a Code of Conduct for Suppliers. Amongst other things, the Code covers safety, health and environmental matters. It also forbids dealing in or buying products made using child labour. The Code of Conduct is in line with the Code of Conduct that applies to our own employees, and compliance with it forms part of the selection procedure for new suppliers.

## Supplier categories

We divide our product and service groups into the following categories:

- ▶ **Strategic:**  
Suppliers of strategic products and/or services are subject to stringent requirements. This is because any interruption of supply entails a high risk for us, and the cost of finding a new supplier is high.
- ▶ **Critical:**  
Suppliers of critical products and/or services are subject to relatively light requirements. This is because finding a new supplier incurs costs. Interruption of the order-related supply does not entail a high risk.
- ▶ **Non-strategic/ Non-critical:**  
All other products and services are classified as non-critical and non-strategic.

The distribution of orders issued in 2013 was as follows:

Category	Percentage
Building, management and maintenance of the pipeline network	23%
Building, management and maintenance of installations	10%
Materials	15%
Fuel gas, electricity and nitrogen	38%
IT	4%
Facility services and temporary staff	11%

The contractors we engage mainly come from the Netherlands and Germany.

We have no information about indirect suppliers, subcontractors or the provenance of raw materials.

## Annex IV: Data regarding safety, supply chain responsibility and the environment

### Safety

#### Monitoring our safety performance

We report on our safety performance periodically and regularly carry out analyses. We believe that this is the best way of monitoring our performance in this field. We learn continuously, and always seek to improve our performance. For example, we have set up KPIs for injuries requiring medical treatment, and for the number of pipeline incidents. The results are included in our collective targets, as we believe that all employees bear responsibility in such matters.

We have a safety support team, which tracks our performance. The team deals with the practical implementation of policy objectives on the work floor. The team is composed of employees who have extensive operational experience and are close to those employed on the work floor.

#### Safety in the workplace: prevention is better than cure

We take a proactive approach to preventing accidents at work, with regard to both our own employees and employees of third parties. Everyone who works for us is obliged to comply with the applicable working conditions legislation and our own additional requirements. Moreover, when accidents, incidents and dangerous situations are reported, we determine what measures need to be taken to prevent such incidents in the future.

We devote considerable attention to creating a healthy and safe working environment, both in our offices and in the field. Our HRM Manual specifies a number of regulations for this purpose, from rules relating to ergonomic work stations for office staff to procedures to be followed by employees working in the field.

Since we want our employees to be safe not only when they are on our premises but also when they are on the move, we have included a blanket ban on making phone calls (even 'hands-free') while driving. This rule may only be overridden in dire emergencies. Our employees also follow various courses on safety matters.

#### Promoting safety awareness: an ongoing effort

##### *Golden Rules of Safety*


We do our best to ensure that no accidents take place during our working operations. That is why we enforce strict rules regarding safe and responsible working. We place great emphasis on safety awareness, so that our employees apply these rules properly. We have drawn up a Top Ten of the risks that occur most frequently during our operations. For each of these risks we have indicated how they can best be avoided. These are our Golden Rules of Safety, which have to be observed during all working activities and operations. These Rules, which were introduced in 2011, are available in Dutch, German and English. We have summarised them on a handy card that staff can easily refer to at work. We have also launched a special website, not only for our own employees, but also for those of other firms with whom we work.











The Rules help to increase the awareness of risk and safety and to prevent unsafe situations


arising. They make it clear that there are certain types of behaviour that are totally forbidden.

## Golden

RULES OF SAFETY



<p><b>1. GROUNDWORK</b></p>  Dig safely	<p><b>6. WORK PERMIT</b></p>  Only work on equipment which has been isolated and rendered inoperative
<p><b>2. CONFINED SPACES</b></p>  Be sure that confined spaces can be entered safely	<p><b>7. MAKING EQUIPMENT SAFE</b></p>  Only work on equipment which has been isolated and rendered inoperative
<p><b>3. WORKING AT HEIGHT</b></p>  Work safely at height (>2.5 metres)	<p><b>8. PERSONAL PROTECTION EQUIPMENT</b></p>  Use the prescribed personal protection equipment (PPE)
<p><b>4. HOISTING AND LIFTING</b></p>  Never walk under a suspended load	<p><b>9. ALCOHOL AND DRUGS</b></p>  It is prohibited to work under influence of alcohol and drugs
<p><b>5. ROAD SAFETY</b></p>  Drive safely	<p><b>10. SMOKING</b></p>  Do not smoke outside designated smoking areas



**...THINK SAFETY!**

*HSE Management Code*

Following the publication of our Golden Rules of Safety, it was decided that managers also required guidance in safety matters. After all, they need to take important decisions that require them to weigh aspects of health, safety and environment (HSE) against, for instance, questions of time and money. We have therefore laid down guidelines for managers in the HSE Management Code.

*Overview of our policy: Gasunie & Safety brochure*

There is considerable public interest in how we deal with safety matters. Government bodies, such as licensing authorities and regulators, find it helpful to gain some insight into our processes and our Health, Safety & Environment policy. In 2013, to share our knowledge and experience in these areas and ensure consistency in our communications on such matters, we published a brochure on this topic called Gasunie & Safety. It focuses on four aspects of safety that are particularly relevant to our industry: occupational safety, process safety, technical safety and external safety.



## Value chain responsibility

### *Risks in the gas value chain*

We try to keep the effect of our operations on people and the environment to a minimum. But activities within the gas value chain inevitably have an impact on people, the environment and society. We therefore need to look ahead and anticipate specific risks. For example, we are currently seeing new types of gas, with new properties and a different composition: 'green gas' is a case in point. These new gases may impose different requirements on the network itself and the gas equipment of consumers and industrial users.

To guarantee safety, we need good research into the effects of these new gases. As significant players in the chain, we are keen to play our part. That is why we have set requirements for the composition of green gas, to make sure that it can be safely injected into the national gas transport network and can be used safely. In this way, we have laid down an important basis and precondition for the development of the green gas market.

Another risk in the gas value chain is the fact that, over time, the production of gas in Europe is set to decline, while the demand for natural gas will continue to rise. To be able to guarantee security of supply in the long term, we need to import more gas, from Norway or Russia, for example, where there are still large reserves. In addition, there are increasing opportunities for bringing liquefied natural gas by ship from areas further away, such as Africa or the Middle East. All this gas needs to be transported, so gas transport networks will need to be expanded and modified. We also play a role here, through active participation in international pipeline projects. By carrying out activities like these, we promote the security of supply in the future.

### *Collaboration within the chain*

We participate in various 'vertical' and 'horizontal' collaborations to work on, amongst other things, the transition to a sustainable energy supply, the establishment of international safety and environmental standards, and the exchange of knowledge. Examples of such collaborations are the following:

- ▶ **Gas Infrastructure Europe (GIE)**  
GIE is an organisation of some 70 European gas infrastructure companies. Its aim is to find market-based solutions to gas infrastructure problems, whereby the interests of the network users are paramount. For instance, GIE lobbies for a good regulatory climate within Europe, as a precondition for long-term security of supply.
- ▶ **ENTSOG**  
We also participate in ENTSOG, the European Network for Transmission System Operators Gas. We are, amongst other things, a member of the Board. All TSOs in the European Union are obliged to join this organisation, some of whose tasks are established in law. These include drawing up European network codes and a ten-year network development plan at European level. These contribute to the stable development of the European gas market.

- ▶ Groen gas Nederland (GGNL)  
We also take part in Groen Gas Nederland, set up in 2011. GGNL is a foundation whose aim is to speed up the production and sale of green gas in the Netherlands by bringing together knowledge in the field of production, upgrading and injection. Our participation in GGNL is in line with our sustainability strategy. The foundation's explicit target is to produce a total of 300 million m<sup>3</sup> (2,930 million kWh) of green gas with green gas projects in 2014.
- ▶ Other organisations  
We are members of various other European organisations, such as Eurogas, Marcogaz and Gas Transport Europe (GTE). We are also a member of the International Gas Union (IGU), which represents the interests of the gas industry worldwide. The active exchange of knowledge is high on the agenda of all these organisations, with the aim of advancing safety, health, the environment and sustainability. We are active in various workgroups.

To meet our chain responsibility in a wider sense, too, we participate in various horizontal collaborations, including:

- ▶ Energy Delta Institute (EDI)  
The Energy Delta Institute is one of the organisations with whom we work on spreading knowledge of energy matters. Our partners in EDI are Gazprom, the University of Groningen, GasTerra and Shell. EDI's main goal is to contribute to the professional development of both the current managers in the energy sector and the managers of the future. EDI coordinates research projects and training programmes in the field of energy.
- ▶ EnergyValley  
The EnergyValley foundation was set up by government bodies, companies and knowledge institutes. Its aim is to expand the energy economy and associated employment opportunities in the northern provinces of the Netherlands. It focuses on developing sustainable innovation projects. The foundation supports initiators in a variety of ways, by helping them draw up project proposals, for instance, or find appropriate partners to work with.
- ▶ EnergyValleyTop Club  
Gasunie is also a member of the EnergyValleyTop Club. Among other things, this group seeks to promote green energy among the public at large and to enthuse young people about sustainability and technology. Moreover, the Club aims to provide a meeting centre for the energy sector. The EnergyValleyTop Club has set up an alliance, under the name of '*Samen duurzaam aan de top*', to combine the various strengths of knowledge institutes, organisations for high-level sports in Groningen, business and social organisations. In this way, in the coming years, members can work together on various projects to make the energy supply ever more sustainable.

## The environment

### Environmental irregularities

We keep a careful record of environmental irregularities so that we can control them and, where possible, take appropriate measures. The number of reported environmental irregularities per focus area for Gasunie Nederland is as follows:

	2009	2010	2011	2012	2013
Deviation from laws and regulations	0	0	1	2	1
Defects of environmental care system	0	0	0	0	0
Environmental incidents	92	66	66	65	57
Environmental complaints	82	72	72	123	139
Total	174	138	139	190	197

In 2013, a total of 197 environmental irregularities were reported at Gasunie Nederland: one deviation from laws and regulations, 57 environmental incidents and 139 environmental complaints. The total number of environmental incidents and complaints reported in 2013 was approximately the same as in 2012. Of the 139 environmental complaints that were reported in the year under review, 13 had not been caused by us. In 35 other environmental complaints, no irregularities were found at the scene. In 91 of the environmental complaints, irregularities were found and dealt with in accordance with the applicable procedures.

Of the 148 justified environmental irregularities (2012: 156), 71% were related to emissions to the air, 17% to emissions to the soil, 11% noise emissions and 1% emissions to water. These values are therefore of the same order as in 2012. At Gasunie Deutschland, one environmental complaint relating to noise was reported in 2013.

### Refrigerants

We use various types of refrigerant in cooling installations for industrial cooling and air conditioning purposes. In accordance with the Montréal protocol, we have modified our policy and we will terminate the use of refrigerant R22 at the latest in 2015. In 2013, small leaks of refrigerants occurred at six locations. The table below gives an overview of these refrigerant leaks:

Location	R134A [kg]	R410A [kg]	R407C [kg]
Beverwijk		6.2	
Wieringermeer			44
Ravenstein	20	4.5	
Schinnen		4.5	
LNG Maasvlakte			11
Total	20	15	55

No refrigerant leaks occurred at Gasunie Deutschland.

## Raw materials

The following table gives an overview of raw materials used for the transport of natural gas:

- ▶ Diesel oil: Used as fuel for generators providing emergency power in the event of a power cut
- ▶ Methanol: Used to prevent stoppages in installations as a result of freezing and to dry transport pipelines
- ▶ Lubricating oil: Used for the lubrication systems of compressors, gas motors and gas turbines
- ▶ Glycol: Used as antifreeze in cooling water and heating systems, and as a drying agent in the production of natural gas from underground storage caverns
- ▶ Odorant: Used to add an odour to natural gas for safety reasons.

Raw materials used in absolute quantities, based on purchasing figures:

Description	2009		2010		2011		2012		2013	
	GUN	GUD	GUN	GUD	GUN	GUD	GUN	GUD	GUN	GUD
Diesel oil (x 1,000 litres)*	7	0	74	12	23	0	50	0	192	0
Methanol (x 1,000 litres)**	<1	0	0	0	71	0	60	0	29	0
Lubricant oil (x 1,000 litres)	61	2	142	1	69	2	70	<1	23	3
Bought-in glycol (x 1,000 litres)**	1	0	5	0	0	0	6	0	29	0
Odorant use (x 1,000 kg)**	497	0	551	0	463	0	477	0	489	0

Note: This table has been drawn up on the basis of purchasing figures (with the exception of odorant use). These may differ from the actual use due to changes in stock.

\* Diesel oil is used by Gasunie Deutschland only for the emergency power generators and is therefore bought only rarely.

\*\* Methanol, glycol and odorant are not used by Gasunie Deutschland.

## Nitrogen

To make high-calorific natural gas of a quality suitable for certain market segments, we add nitrogen to the natural gas at a number of locations in our gas transport network. The nitrogen added at our installations at Wieringermeer, Pernis and the Maasvlakte was procured from third parties. At our installations in Ommen and Kootstertille, the nitrogen added was produced by us. The following table indicates our use of nitrogen:

Description	2009	2010	2011	2012	2013
	ktonnes	ktonnes	ktonnes	ktonnes	ktonnes
Nitrogen purchased from third parties	401	139	68	17	22
Nitrogen from our own production	433	172	40	15	0
Total	834	311	108	32	22

Remarkably, the volume of nitrogen used for the quality conversion of high-calorific gas (H gas) to Groningen gas (G gas) in 2012 and 2013 was considerably lower than in the preceding years. This is because in 2012 and 2013 considerably more G gas was produced, and there was therefore less need to convert H gas to pseudo Groningen (pseudo G gas), a process that involves the addition of nitrogen.

### Acidifying substances

In our gas turbines, gas motors and heating installations, we use natural gas as a fuel. During this process, acidifying substances (NO<sub>x</sub>) are emitted. The NO<sub>x</sub> emissions in 2013 amounted to 466 tonnes (2012: 404 tonnes).

To find out whether our compressor stations meet the new requirements of the European guideline for industrial emissions<sup>9</sup>, we have conducted talks with the Dutch Ministry of Infrastructure & Environment (I&M) about the possible timetable for implementing this legislation. We currently have a number of gas turbines that do not yet meet the NO<sub>x</sub> requirements in the new guidelines. We have therefore started the process of enabling our gas-fired compressors to meet the new requirements. One of the measures we intend to take is to install flue gas cleaning in the exhaust gas ducts of two gas turbines at Ravenstein.

Many of our gas turbines are only used for a very limited number of hours (usually less than 500 hours per year), but they are necessary in order to be able to meet the gas demand in extreme weather conditions (severe winters).

#### *The absolute value of NO<sub>x</sub>*

Description	2009	2010	2011	2012	2013
	[tonnes]	[tonnes]	[tonnes]	[tonnes]	[tonnes]
NO <sub>x</sub> emissions at GUN	461	531	244	297	<b>365</b>
NO <sub>x</sub> emissions at GUD	63	83	92	107	<b>101</b>
Total NO <sub>x</sub> emissions	524	614	336	404	<b>466</b>

The rise in NO<sub>x</sub> emissions at Gasunie in the Netherlands was mainly caused by the harsh winter at the start of 2013. In Germany, NO<sub>x</sub> emissions in 2013 fell slightly, from 107 to 101 tonnes.

<sup>9</sup> GUIDELINE 2010/75/EU OF THE EUROPEAN PARLIAMENT AND THE BOARD of 24 November 2010 concerning industrial emissions (integrated prevention and control)

### Soil pollution

Gasunie's soil policy aims to prevent or limit soil pollution, to control risks to the soil and to fully rectify any soil incidents that may occur. Typical soil-polluting substances at Gasunie are lubricating oil, diesel oil, polycyclic aromatics and odorant. We perform soil inspections in the following cases:

- ▶ At locations suspected to be contaminated (on-site soil inspection). In consequence of the duty of care imposed by Article 13 of the Dutch Soil Protection Act, the soil must be inspected at locations and installations which are suspected to be at greater risk of soil pollution. We also perform inspections at locations such as pipeline routes, filled-in ditches and the like, which are known to have been contaminated by third parties in the past.
- ▶ At locations where groundwater is extracted.
- ▶ To determine the zero situation at places where there are plans to locate or expand installations or buildings.

### Soil decontamination

Soil pollution incidents that took place after 1987 are subject to the duty of care imposed in Article 13 of the Dutch Soil Protection Act. This article requires that such cases of pollution (often called 'duty of care' cases) must be decontaminated immediately, in a number of different ways. Historical instances of soil pollution are decontaminated in the most efficient way, preferably in combination with maintenance activities or new building projects.

If the pollution was caused by Gasunie, we remove the polluted soil. If the pollution was caused by a third party, the polluted soil (if possible and permissible) will be preserved in depot and replaced later.

In 2013, we carried out soil decontaminations at 30 locations. At 8 locations, the decontamination took place in the context of the duty of care; while at 4 locations the polluted soil was removed temporarily. In 2013, we completed the compressed air decontamination started in 2010 at the LNG Maasvlakte site. At 47 locations we monitored the quality of the groundwater; at 8 locations we carried out investigations to establish the situation at the time.

### Noise emissions

Dutch law requires that noise reduction measures need to be taken in the case of new-build stations, in the case of major modifications to stations, and in the event of complaints. In 2013, we carried out 29 noise measurements and 12 calculations in connection with applications for environmental permits, projects and other situations in which, as a result of modifications, noise problems could possibly arise. We carried out 10 studies and 8 noise measurements in order to verify whether we were complying with the permit conditions. We noticed two excesses which necessitated measures being carried out. In addition, we took another 21 measurements for internal purposes, 20 of which were for the GNIP programme and one due to a noise complaint.

Description	2009	2010	2011	2012	2013
Total number of measurements and calculations carried out	21	20	32	15	41
Number of measurements carried out whose outcome did not comply with the legal norm	5	0	3	0	21
Number of calculations for requesting environmental permits	12	4	4	9	10

Our policy in Germany with regard to noise emissions is that measures will be taken if complaints have been raised or if noise problems might occur as a consequence of an adjustment. Gasunie Deutschland has a noise register for all relevant systems. Noise measurements will be carried out for all new buildings and in the event of significant changes at existing installations.

### Financial penalties

In 2013, we were fined a total of € 6,000 for extracting too much groundwater in connection with new-build projects.

### Footprint reduction

It is our aim that our operational activities impose as small a burden on the environment as possible. We are therefore actively trying to reduce our environmental footprint. Ways we are doing this include continuing to improve our energy efficiency, and reducing the emission of greenhouse gases during our activities. Our ambition is, by the year 2020, to reduce emissions of CO<sub>2</sub> equivalents by 20% (compared to 1990). In 2013, we took a number of measures to meet this ambition (described in more detail under Environmental Performance). A complete summary of measures regarding both the process approach in improving energy efficiency and the reduction of methane emissions can be found in our report entitled 'Footprint at Gasunie'. It describes how our ambition originated and the principles on which our footprint strategy is based.

### Energy efficiency

One aspect of our footprint reduction efforts includes increasing energy efficiency. This not only involves re-examining our gas transport system process to see how we can save energy there, but also looking at energy efficiency in other aspects of our operations, such as in our offices. Examples of how we may be able to save energy in our operations include the possibility of lowering incoming pressure, installing thermal insulation in heat networks and reducing the temperature at our gas receiving stations. At those stations the pressure of the natural gas is adjusted to the pressure in the regional distribution network. During this process, the gas cools so much that heating is required to bring the gas back to the contractually agreed temperature.

In the Netherlands, this heating requires some 30 million m<sup>3</sup> of natural gas per year, which is a considerable amount. We therefore investigated whether this could be done more efficiently – and it could. In a pilot project carried out in the summer of 2013 at the metering and regulation station at Nederweert, pressure was reduced by two bar. This resulted in savings of fuel gas and an associated reduction of CO<sub>2</sub> of about 5%.

### Methane emissions

We also took measures to reduce the emission of methane during our activities. Where possible and feasible, we use a mobile recompressor or combustion unit. This limits the venting of gas during operations. In our results section, we explain the savings that we were able to achieve using recompression and describe the specific efforts we are making to improve energy efficiency.

### Sustainable transport

One of our collective objectives is to reduce the number of kilometres driven for business purposes. We therefore encourage the use of meeting methods that do not require employees to be physically present in the same room. We do that, for example, by providing good facilities for teleconferencing, videoconferencing and working from home. In 2013, we took a big step forward in facilitating working from home by providing associated technological support. For example, most employees have been provided with a mobile phone or smartphone, and in 2013, we installed a new IT architecture and new computers for all employees. These enable them to work independently of time and location, whether alone or together. This makes for more effective business operations and makes work more enjoyable. Having said that, we do believe that, for the purposes of teamwork, it is good that employees meet regularly in person.



## HSE programme 2014

On the basis of the HSE Management Review 2011–2012, which serves as a basis for our HSE policy, we will carry out the following HSE programme in 2014:

### External safety

High priority for reaching an agreement with the Ministry of Infrastructure & Environment about the calculation methods.

Continuing vigilance to prevent pipeline damage, especially to pipelines with little cover.

### Technical safety

Relieving bottlenecks in pressure control systems.

Improving the process with respect to maintenance concepts.

Implementing KPIs with respect to technical safety and process safety.

### Occupational safety

Encouraging employees to adopt behavioural changes on the work floor that will improve occupational safety.

Increasing the level of knowledge about occupational safety.

### The environment and sustainable development

Implementing the footprint strategy plan.

Investigating and comparing the measurement methods for fugitive emissions of natural gas.

Starting a programme for measuring and preventing fugitive emissions of natural gas at gas receiving stations.

Applying pressure reduction to a number of metering and regulating stations during the summer to reduce the use of natural gas.

Starting a project for placing flue gas cleaning in the exhaust duct of compressors. This technology is one of the measures to ensure that the compressors comply with the new NO<sub>x</sub> emission requirements.

Optimising energy efficiency at gas receiving stations.

Gasunie Deutschland: Setting up a register for recording data on natural gas emissions in various parts of the gas transport system in order to eventually reduce methane emissions.

### HSE culture and communication

Continuing to stimulate safety awareness and safety behaviour.

Raising HSE awareness among management and employees.

## Awareness

Both in the Netherlands and in Germany, in 2013, we carried out a number of awareness campaigns to make employees more aware of CO<sub>2</sub> compensation of business kilometres and other activities. In 2013, Gasunie Deutschland started a programme for CO<sub>2</sub> compensation of train and air travel.

## Safety indicators 2009–2013

Indicators	Unit
<b>Incidents with absence</b>	
Frequency index for Gasunie employees	Incidents with absence per 1 million working hours
Incidents with absence: frequency index third parties	Incidents with absence per 1 million working hours
Incidents with absence: frequency index total	Incidents with absence per 1 million working hours
Reportable <sup>4)</sup> incidents: frequency index total	Reportable incidents per 1 million working hours
Incidents with absence	
- Gasunie employees	Number
- Third parties	Number
<b>Incidents without absence (incl. replacement work)</b>	
- Gasunie employees	Number
- Third parties	Number
Reportable incidents	Number
Potentially serious situations	Number
<b>Damage to Gasunie pipelines</b>	
- Excavation damage by third parties	Number
- Construction/material defects	Number
- Inaccurate drilling	Number
- Other	Number
Pipeline damage with gas leaks	Number
Reported pipeline damage	Number
<b>Gas leak incidents: comparison Gasunie-EGIG</b>	
- EGIG	Number of incidents per 1,000 km per year
- Gasunie	Number of incidents per 1,000 km per year

Remarks:

(1) Not applicable to GUD.

(2) The indicators of GUN and GUD cannot be combined due to different definitions.

(3) By reportable incidents we mean fatal accidents, incidents with absence and incidents with medical treatment (other than first aid).

(4) Small hole (pinhole) caused by corrosion.

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2009			2010			2011			2012			2013		
GUN	GUD	Total	GUN	GUD	Total	GUN	GUD	Total	GUN	GUD	Total	GUN	GUD	Total
0.8	0	- <sup>2)</sup>	0.4	0	- <sup>2)</sup>	0.4	0	- <sup>2)</sup>	0	- <sup>1)</sup>	0.4	<b>0.8</b>	<b>0</b>	- <sup>2)</sup>
2.1	4.9	- <sup>2)</sup>	2.1	0	- <sup>2)</sup>	1.5	0	- <sup>2)</sup>	1.4	- <sup>1)</sup>	1.7	<b>1.0</b>	<b>0</b>	- <sup>2)</sup>
1.6	1.7	- <sup>2)</sup>	1.4	0	- <sup>2)</sup>	1.1	0	- <sup>2)</sup>	0.8	- <sup>1)</sup>	1.2	<b>0.9</b>	<b>0</b>	- <sup>2)</sup>
6.2	-	-	7.2	0	6.7	4.7	0	4.3	2.1	- <sup>1)</sup>	2.5	<b>3.9</b>	<b>0</b>	<b>3.6</b>
2	0	2	1	0	1	1	0	1	0	1	1	2	0	2
10	1	11	10	0	10	7	0	7	5	2	7	3	0	3
4	0	4	10	0	10	7	0	7	1	0	1	6	0	6
28	0	28	30	0	30	21	0	24	6	0	6	10	0	10
45	-	45	51	0	51	31	0	31	12	3	15	21	0	21
21	-	21	11	-	11	6	-	6	17	-	17	20	0	20
8	0	8	2	0	2	6	1	7	5	0	5	6	0	6
0	0	0	0	0	0	0	0	0	2	0	2	1	0	1
0	0	0	0	0	0	0	0	0	1	0	1	0	0	0
0	0	0	1 <sup>4)</sup>	0	1 <sup>4)</sup>	0	0	0	0	0	0	0	0	0
0	0	0	1 <sup>4)</sup>	0	1 <sup>4)</sup>	1	0	1	1	0	1	0	0	0
0	- <sup>1)</sup>	0	0	- <sup>1)</sup>	0	1	- <sup>1)</sup>	1	1	- <sup>1)</sup>	1	0	0	0
-	- <sup>1)</sup>	0.359	-	- <sup>1)</sup>	0.352	-	- <sup>1)</sup>	0.344	-	- <sup>2)</sup>	0.344	-	- <sup>2)</sup>	tbd
0.336	- <sup>1)</sup>	0.336	0.327	- <sup>1)</sup>	0.327	0.320	- <sup>1)</sup>	0.320	0.316	- <sup>2)</sup>	0.316	<b>0.308</b>	- <sup>2)</sup>	<b>0.308</b>

## Health indicators 2009–2013

Indicator	Unit	2009	2009	2009
		GUN	GUD	Total
Absence due to sickness (total)	Percentages	3.3	1.9	- <sup>(2)</sup>
- short-term absence	Percentages	0.9	1.2	- <sup>(2)</sup>
- medium-term absence	Percentages	0.8	0.5	- <sup>(2)</sup>
- long-term absence	Percentages	1.7	0.2	- <sup>(2)</sup>
Zero absence	Percentages	40	41	- <sup>(2)</sup>
Absence frequency	Frequency	1.2	1.3	- <sup>(2)</sup>
Work-related absence (reported by employee)	Number	1	0	1
Reported to the Netherlands Centre for Occupational Diseases (NCB)	Number	0	- <sup>(1)</sup>	0
Entering WIA <sup>(3)</sup> (incl. partial)	Number	2	- <sup>(1)</sup>	2
Leaving WIA <sup>(3)</sup>	Number	0	- <sup>(1)</sup>	0

Remarks:

(1) Not applicable to GUD.

(2) The indicators of GUN and GUD cannot be combined due to different definitions.

(3) WIA = Capacity for Work Act.

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	2010			2011			2012			2013		
	GUN	GUD	Total	GUN	GUD	Total	GUN	GUD	Total	GUN	GUD	Total
	2.8	2.7	- <sup>2)</sup>	3.3	2.6	- <sup>2)</sup>	3.3	-	- <sup>2)</sup>	<b>3.1</b>	<b>3.5</b>	- <sup>2)</sup>
	0.8	1.2	- <sup>2)</sup>	0.8	- <sup>1)</sup>	- <sup>2)</sup>	0.8	- <sup>1)</sup>	- <sup>2)</sup>	<b>0.8</b>	- <sup>1)</sup>	- <sup>2)</sup>
	0.6	0.9	- <sup>2)</sup>	0.7	- <sup>1)</sup>	- <sup>2)</sup>	0.6	- <sup>1)</sup>	- <sup>2)</sup>	<b>0.7</b>	- <sup>1)</sup>	- <sup>2)</sup>
	1.4	0.6	- <sup>2)</sup>	1.8	- <sup>1)</sup>	- <sup>2)</sup>	1.8	- <sup>1)</sup>	- <sup>2)</sup>	<b>1.5</b>	- <sup>1)</sup>	- <sup>2)</sup>
	46.6	-	- <sup>2)</sup>	46.5	-	- <sup>2)</sup>	44.4	-	- <sup>2)</sup>	<b>43.0</b>	-	- <sup>2)</sup>
	1.1	1.6	- <sup>2)</sup>	1.1	- <sup>2)</sup>	- <sup>2)</sup>	1.1	- <sup>2)</sup>	- <sup>2)</sup>	<b>0.9</b>	- <sup>2)</sup>	- <sup>2)</sup>
	10	0	10	9	0	9	14	0	14	<b>9</b>	<b>0</b>	<b>9</b>
	0	- <sup>1)</sup>	0	1	- <sup>1)</sup>	1	1	- <sup>1)</sup>	1	<b>1</b>	- <sup>1)</sup>	<b>1</b>
	2	- <sup>1)</sup>	2	3	- <sup>1)</sup>	3	3	- <sup>1)</sup>	3	<b>2</b>	- <sup>1)</sup>	<b>2</b>
	0	- <sup>1)</sup>	0	0	- <sup>1)</sup>	0	0	- <sup>1)</sup>	0	<b>0</b>	- <sup>1)</sup>	<b>0</b>

## Environmental indicators 2009–2013

Indicator	Unit	2009	2009	2009
		GUN	GUD	Total
<b>Quantities of transported natural gas</b>	Billion m <sup>3</sup>	99	22.6	121.6
<b>Methane emissions</b>	Tonnes	6,111	741	6,852
<b>CO<sub>2</sub>-equivalent emissions</b>				
<b>Scope 1</b>				
Lease cars	Ktonnes	-	-	-
Company cars	Ktonnes	-	-	-
Gas usage in buildings	Ktonnes	-	-	-
Network losses	Ktonnes	-	-	-
SF6	Ktonnes	-	-	-
Gas usage in installations	Ktonnes	-	-	-
Emergency generators	Ktonnes	-	-	-
Refrigerants	Ktonnes	-	-	-
<b>Total for Scope 1</b>	Ktonnes	361	87	448
<b>Scope 2</b>				
Heating in buildings	Ktonnes	-	-	-
Electricity usage in buildings	Ktonnes	-	-	-
Electricity usage in installations	Ktonnes	-	-	-
<b>Total for Scope 2</b>	Ktonnes	141	4	145
<b>Scope 3</b>				
Train travel	Ktonnes	-	-	-
Business travel	Ktonnes	-	-	-
Commuting	Ktonnes	-	-	-
Air travel	Ktonnes	-	-	-
Procurement of N <sub>2</sub>	Ktonnes	-	-	-
<b>Total for Scope 3</b>	Ktonnes	46	-	46
<b>Total for Scope 1 + 2 + 3</b>	Ktonnes	548	91	639
<b>Natural gas use</b>	Million m <sup>3</sup>	115.4	34.2	149.6
<b>Electricity use</b>	Million kWh	299.0	5.8	304.8
<b>Mains water consumption</b>	Thousand m <sup>3</sup>	41.9	2.1	44.0
<b>NO<sub>x</sub> emission</b>				
<b>NO<sub>x</sub> emission (absolute)</b>	Tonnes	461	63	524

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	2010	2010	2010	2011	2011	2011	2012	2012	2012	2013	2013	2013
	GUN	GUD	Total	GUN	GUD	Total	GUN	GUD	Total	GUN	GUD	Total
	111	24.6	135.6	102	24.5	126.5	105.0	24.2	129.2	<b>116.0</b>	<b>23.9</b>	<b>139.9</b>
	6,480	741	7,221	6,740	436	7,176	6,705	363	7,068	<b>9,514</b>	<b>690</b>	<b>10,204</b>
	-	-	-	-	-	-	-	-	-	2.8	-	2.8
	-	-	-	-	-	-	-	-	-	1.2	-	1.2
	-	-	-	-	-	-	-	-	-	1.6	-	1.6
	-	-	-	-	-	-	-	-	-	238	17	255
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	200	113	313
	-	-	-	-	-	-	-	-	-	0.04	-	0.04
	-	-	-	-	-	-	-	-	-	0.2	-	0.2
	404	106	510	316	106	422	332	121	453	444	131	575
	-	-	-	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	3.3	-	3.3
	-	-	-	-	-	-	-	-	-	164	-	164
	135	4	139	160	4	164	138	5	143	167	5	172
	-	-	-	-	-	-	-	-	-	0.01	-	0.01
	-	-	-	-	-	-	-	-	-	0.3	-	0.3
	-	-	-	-	-	-	-	-	-	1.3	-	1.3
	-	-	-	-	-	-	-	-	-	0.3	-	0.3
	-	-	-	-	-	-	-	-	-	2.0	-	2.0
	16		16	7		7	2		2	4	-	4
	555	110	665	483	110	593	472	126	598	615	136	751
	132.0	44.6	176.6	82.7	59.0	141.7	89.4	64.7	154.1	104.4	64.3	168.7
	284.5	6.5	291.0	338.9	6.7	345.6	382.5	7.3	389.8	441.2	7.4	448.6
	50.7	2.1	52.7	39.0	3.2	42.2	33.1	1.7	34.8	46.5	1.8	48.3
	531	83	614	244	921	336	297	107	404	365	101	466

## Environmental indicators 2009–2013 (continued)

Indicator	Unit	2009 GUN	2009 GUD	2009 Total
<b>Purchasing details auxiliary substances</b>				
Diesel oil	Litres x 1,000	7	- <sup>2)</sup>	- <sup>2)</sup>
Methanol	Litres x 1,000	0.1	0	0.1
Lubricating oil	Litres x 1,000	61	2.4	63.4
Glycol	Litres x 1,000	1	0	1
Odorant	Litres x 1,000	497	0	497
Nitrogen purchased from third parties	Tonnes x 1,000	401	- <sup>1)</sup>	401
Nitrogen from own production	Tonnes x 1,000	433	- <sup>1)</sup>	433
Nitrogen Total	Tonnes x 1,000	834	- <sup>1)</sup>	834
<b>Total number of reported environmental irregularities</b>				
Number of justified environmental irregularities per focus area				
- Soil	Number	44	0	44
- Water	Number	0	0	0
- Air	Number	96	0	96
- Other	Number	4	0	4
<b>Amount of hazardous waste</b>				
	Tonnes	1,804	-	1,804
<b>Amount of non-hazardous waste</b>				
	Tonnes	14,072	-	14,072
<b>Waste disposal</b>				
- Reuse	Percentages	88.2	- <sup>2)</sup>	88.2
- Incineration	Percentages	7.5	- <sup>2)</sup>	7.5
- Landfill	Percentages	4.3	- <sup>2)</sup>	4.3

Remarks:

(1) Not applicable to GUD.



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	2010	2010	2010	2011	2011	2011	2012	2012	2012	2013	2013	2013
	GUN	GUD	Total	GUN	GUD	Total	GUN	GUD	Total	GUN	GUD	Total
	74	12	86	23	0	23	50	13	63	192	0	192
	0	0	0	71	0	71	60	0	60	29	0	29
	142	1.4	143.4	69	1.5	70.5	70	4	74	23	3	26
	5.2	0	5.2	0	0	0	6	0	6	29	0	29
	551	-	551	463	0	463	477	0	477	489	0	489
	139	- <sup>1)</sup>	139	68	- <sup>1)</sup>	68	17	- <sup>1)</sup>	17	22	- <sup>1)</sup>	22
	172	- <sup>1)</sup>	172	40	- <sup>1)</sup>	40	15	- <sup>1)</sup>	15	0	- <sup>1)</sup>	0
	311	- <sup>1)</sup>	311	108	- <sup>1)</sup>	108	32	- <sup>1)</sup>	32	22	- <sup>1)</sup>	22
	124	1	125	120	0	120	190	2	192	197	1	198
	23	0	23	21	0	21	27	1	28	25	0	25
	2	0	2	0	0	0	3	0	3	2	0	2
	94	0	94	90	0	90	105	0	105	105	0	105
	5	1	6	9	0	9	22	1	23	16	1	17
	1,494	22	1,516	3,135	59	3,194	2,632	50	2,682	4,233	41	4,274
	14,316	219	14,535	15,678	290	15,968	22,495	585	23,080	16,029	127	16,156
	90.5	83.8	90.4	85.1	83.2	85.1	89.2	92.0	89.3	89.1	75.8	89.0
	6.3	9.5	6.3	6.5	16.8	6.7	4.4	7.9	4.5	1.7	24.2	1.8
	3.2	7.7	3.3	8.4	0.0	8.2	6.4	0.0	6.2	9.2	0.0	9.2

## Environmental performance of Gasunie locations 2009–2013

The tables below show the legally required breakdown of energy and water consumption and emissions of large locations in the Netherlands.

Overview of energy and water consumption in 2009, 2010, 2011, 2012 and 2013					
Location	Gas [m <sup>3</sup> x 1,000]				
	2009	2010	2011	2012	2013
Alphen	63	151	47	48	43
Beverwijk	6,376	12,142	2,077	2,969	4,882
Kootstertille	10	11	11	7	6
LNG	1,041	523	8,426	2,135	8,003
Oldeboorn	483	6,216	2,492	5,797	8,889
Ommen	13,950	12,515	4,122	15,058	16,798
Ravenstein	25,078	26,149	8,382	9,588,008	13,278,348
Spijk	24,084	17,113	6,306	4,833	3,419
Wieringermeer	2,832	4,922	4,713	3,260	4,613
Zweekestad	5,304	20,325	11,400	9,980	15,009
Grijpskerk	3	4	4	4	4
Anna Paulowna	0	10	8	13	16
Scheemda	-	-	-	-	0
Wijngaarden	-	-	-	-	0
Zuidwending	-	-	-	3,414	2,880

Overview of energy and water consumption in 2009, 2010, 2011, 2012 and 2013					
Location	Electricity [MWh]				
	2009	2010	2011	2012	2013
Alphen	209	318	249	269	305
Beverwijk	1,487	1,602	1,423	1,455	1,470
Kootstertille	8,196	8,430	9,088	3,582	2,070
LNG	28,965	19,971	17,738	6,177	23,604
Oldeboorn	762	838	801	810	766
Ommen	106,080	50,037	21,806	12,124	9,564
Ravenstein	2,285	2,095	2,055	2,012	2,070
Spijk	1,708	1,627	1,383	1,334	1,251
Wieringermeer	1,857	1,948	1,999	1,869	1,822
Zweekestad	849	981	1,056	1,052	1,130
Grijpskerk	1,260	1,420	1,714	1,625	2,182
Anna Paulowna	126,313	163,691	117,615	133,674	158,216
Scheemda	-	12,121	70,557	94,127	97,971
Wijngaarden	-	-	2,707	19,405	48,418
Zuidwending	-	-	70,374	78,105	71,851

Overview of energy and water consumption in 2009, 2010, 2011, 2012 and 2013					
Location	Water [m <sup>3</sup> x 1,000]				
	2009	2010	2011	2012	2013
Alphen	0.1	0.1	0.2	0.1	0.2
Beverwijk	0.4	0.5	0.4	0.2	0.6
Kootstertille	0.0	0.0	0.1	0.0	0.0
LNG	23.3	33.5	17.0	15.0	26.9
Oldeboorn	0.2	0.2	0.5	0.2	0.0
Ommen	1.5	1.7	2.0	1.6	1.3
Ravenstein	0.6	0.6	0.6	1.4	0.9
Spijk	0.2	0.2	0.2	0.2	0.2
Wieringermeer	0.8	0.4	0.8	0.2	0.4
Zwee horst	0.1	0.1	0.5	0.6	0.4
Grijpskerk	0.0	0.0	0.1	0.1	0.6
Anna Paulowna	0.1	0.8	0.2	0.4	0.0
Scheemda	-	-	-	-	0.0
Wijngaarden	-	-	-	-	0.9
Zuidwending	-	-	-	0	0.3

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Overview of emissions in 2009, 2010, 2011, 2012 and 2013					
Location	NO <sub>x</sub> [tonnes]				
	2009	2010	2011	2012	2013
Alphen	0	1	0	0	0
Beverwijk	14	32	6	7	15
Kootstertille	0	0	0	0	0
LNG	1	1	1	0	1
Oldeboorn	1	16	7	18	26
Ommen	44	45	12	71	77
Ravenstein	77	83	20	29	41
Spijk	248	175	70	50	34
Wieringermeer	11	21	23	14	23
ZweeThorst	31	127	74	68	107
Grijpskerk	0	0	0	0	0
Anna Paulowna	0	0	0	0	0
Scheemda	-	-	-	-	0
Wijngaarden	-	-	-	-	0
Zuidwending	-	-	-	3	0

Overview of emissions in 2009, 2010, 2011, 2012 and 2013					
Location	Methane [tonnes]				
	2009	2010	2011	2012	2013
Alphen	6	12	7	12	13
Beverwijk	213	239	145	334	358
Kootstertille	61	0	0	12	15
LNG	386	216	1,007	401	525
Oldeboorn	99	147	111	178	143
Ommen	637	897	662	970	931
Ravenstein	375	366	325	210	294
Spijk	512	454	274	292	242
Wieringermeer	122	168	150	372	423
ZweeThorst	150	153	201	152	170
Grijpskerk	0	0	0	9	34
Anna Paulowna	21	5	23	33	27
Scheemda	-	-	-	33	18
Wijngaarden	-	-	-	46	21
Zuidwending	-	-	244	801	70

Overview of emissions in 2009, 2010, 2011, 2012 and 2013					
Location	Carbon dioxide [tonnes]				
	2009	2010	2011	2012	2013
Alphen	115	272	86	88	<b>80</b>
Beverwijk	11,465	21,754	3,724	5,311	<b>8,732</b>
Kootstertille	17	20	20	12	<b>11</b>
LNG	1,874	942	15,097	4,170	<b>14,313</b>
Oldeboorn	871	11,137	4,466	10,368	<b>15,897</b>
Ommen	25,093	22,432	7,398	26,940	<b>30,050</b>
Ravenstein	45,088	46,848	15,020	17,151	<b>23,743</b>
Spijk	51,683	36,214	11,328	10,216	<b>7,708</b>
Wieringermeer	5,096	8,822	8,448	5,835	<b>8,254</b>
Zweekhorst	9,539	36,412	20,425	17,850	<b>26,840</b>
Grijpskerk	5	8	7	7	<b>8</b>
Anna Paulowna	3	20	17	26	<b>28</b>
Scheemda	-	-	-	-	<b>0</b>
Wijngaarden	-	-	-	-	<b>0</b>
Zuidwending	-	-	5,745	6,120	<b>5,150</b>

The table below shows the breakdown of energy consumption and emissions of large locations in Germany.

Location	Gas m <sup>3</sup> x 1,000				
	2009	2010	2011	2012	2013
Rysum	26,106	22,025	32,960	41,761	<b>28,975</b>
Bunder Tief	1,309	1,537	327	90	<b>73</b>
Folmhusen	3,308	7,489	5,810	2,902	<b>4,145</b>
Wardenburg	614,000	2,902	5,122	5,253	<b>7,613</b>
Achim	1,794	8,155	9,494	9,558	<b>14,330</b>
Holtum	122,000	102	184	1,844	<b>142</b>
Ellund	626,000	937	3,674	2,145	<b>5,020</b>
Quarnstedt	52,500	1,060	1,140	1,070	<b>3,066</b>
Total	33,931	44,206	58,712	64,623	<b>63,364</b>
Pipeline network	4,279	4,279	245	85	<b>910</b>
Biogas installations					<b>6</b>
<b>Total</b>	<b>38,210</b>	<b>48,485</b>	<b>58,958</b>	<b>64,708</b>	<b>64,280</b>

Location	NO <sub>x</sub> [tonnes]				
	2009	2010	2011	2012	2013
Rysum	49.2	42.0	52.0	66.5	<b>45.0</b>
Bunder Tief	2.4	3.0	0.0	0.1	<b>0.0</b>
Folmhusen	6.0	14.0	4.0	5.3	<b>5.4</b>
Wardenburg	0.9	5.0	9.0	9.2	<b>11.6</b>
Achim	3.0	15.0	18.0	17.7	<b>25.7</b>
Holtum	0.1	0.0	0.0	2.8	<b>0.1</b>
Ellund	1.1	2.0	6.0	3.4	<b>8.1</b>
Quarnstedt	0.0	2.0	2.0	1.7	<b>4.9</b>
Total	63.0	83.0	92.0	107.0	<b>100.8</b>
Pipeline network	-	-	-	-	<b>0.2</b>
Biogas installations					<b>0.0</b>
<b>Total</b>	<b>63.0</b>	<b>83.0</b>	<b>92.0</b>	<b>107.0</b>	<b>101.1</b>

Location	Methane [tonnes]				
	2009	2010	2011	2012	2013
Rysum	84.9	59	74	76	<b>49</b>
BunderTief	24.8	23	12	7	<b>7</b>
Folmhusen	75.4	62	59	56	<b>82</b>
Wardenburg	73.6	58	54	47	<b>54</b>
Achim	132.6	208	117	115	<b>127</b>
Holtum	22.5	3	21	37	<b>32</b>
Ellund	10.6	31	41	11	<b>13</b>
Quarnstedt	16.6	60	12	11	<b>16</b>
Total	0	504	390	359	<b>380</b>
Pipeline network		-	-		<b>310</b>
Biogas installations					
<b>Total</b>	741	504	781	359	<b>690</b>

Location	CO <sub>2</sub> [tonnes]				
	2009	2010	2011	2012	2013
Rysum	55,562	47,179	54,191	68,896	<b>52,025</b>
BunderTief	2,510	2,965	455	69	<b>94</b>
Folmhusen	5,912	13,727	4,329	5,395	<b>6,927</b>
Wardenburg	940,000	5,230	9,795	9,565	<b>12,934</b>
Achim	2,986	14,566	18,268	18,328	<b>25,787</b>
Holtum	181,000	196	186	2,936	<b>170</b>
Ellund	1,244	1,868	6,083	3,486	<b>8,662</b>
Quarnstedt	60,000	1,923	1,847	1,754	<b>5,931</b>
Total	69,397	87,654	95,155	110,428	<b>112,530</b>
Pipeline network	17,000	-	-	-	<b>767</b>
Biogas installations					<b>12</b>
<b>Total</b>	69,414	87,654	95,155	110,428	<b>113,308</b>

## Annex V: GRI tracking table

Strategy and analysis			
Indicator	Description	Reference	Page
1.1	SB and Management about the relevance of sustainability to the organisation and its strategy	Foreword by the EB, Strategy, Report of the SB	5 ff., 79 ff.
1.2	Description of key impacts, risks and opportunities	Foreword by the EB, Strategy, Risk Management, Our results in 2013, Financial risks (annual financial statements)	5 ff., 21 ff., 73, 27, 152 ff.
Organisational profile			
Indicator	Description	Reference	Page
2.1	Name of the organisation	About Gasunie (Profile)	9 ff.
2.2	Primary products and services	About Gasunie (Profile)	9 ff.
2.3	Operational structure	About Gasunie (Profile)	9 ff.
2.4	Location of the head office	About Gasunie (Profile)	9 ff.
2.5	Number of countries where the organisation operates	About Gasunie (Profile)	9 ff.
2.6	Nature of ownership and legal form	Governance	89
2.7	Markets served	Annex III: Product and supplier information	197 ff.
2.8	Scale of the organisation	About Gasunie (Profile)	9 ff.
2.9	Changes regarding size, structure or ownership	About Gasunie (Profile), Report of the Supervisory Board	9 ff., 87 ff.
2.10	Awards received in the reporting period	None	
Report parameters			
Indicator	Description	Reference	Page
3.1	Reporting period	Annex II: Reporting principles	194 ff.
3.2	Date of most recent previous report	April 2013	194 ff.
3.3	Reporting cycle (annual, biannual, etc.)	Annex II: Reporting principles (annual)	194 ff.
3.4	Contact point for question regarding the report or its contents	Back cover	232
3.5	Process for defining report content	Annex II: Reporting principles (Reporting policy)	194 ff.
3.6	Boundary of the report	Annex II: Reporting principles (Coverage & Scope)	194 ff.
3.7	Limitations on the scope or boundary of the report	Annex II: Reporting principles (Coverage & Scope)	194 ff.
3.8	Entities that can significantly affect comparability from period to period and/or between organisations	Results in the fields of safety, the environment and supply chain responsibility, and Annex II: Reporting principles	43 ff., 194 ff.
3.9	Data measurement techniques and the bases of calculations	Annex II: Reporting principles (Measuring and registration systems)	194 ff.
3.10	Re-statements of information provided in earlier reports	About Gasunie (Profile); footnote to Key figures	9, 50/51
3.11	Environmental performance (GHG scopes)	Environmental performance (GHG scopes)	50/51
3.12	GRI content index	Annex V	224 ff.
3.13	Policy and current practice with regard to seeking external assurance for the report	Annex II: Reporting principles (verification), and 'Combined auditor's statement and assurance report'	194 ff., 188



Governance, commitments and engagement			
Indicator	Description	Reference	Page
4.1	Governance structure of the organisation	Profile (Organisational chart)	9 ff.
4.2	Is the Chairman of the highest governance body also an executive officer?	Governance (Composition of EB)	87 ff.
4.3	Number of members of the highest governance body that are independent and/or non-executive members	None. Governance (Composition of EB)	87 ff.
4.4	Mechanisms to provide recommendations or direction to the highest governance body	Governance (Composition of Works Councils), Employees (Employee participation)	89 ff., 64
4.5	Linkage between compensation and the organisation's performance	Employees (collective targets), Governance (Remuneration policy for the EB)	57 ff., 79 ff.
4.6	Processes to ensure conflicts of interest are avoided	Governance	79 ff.
4.7	Determining the qualifications and expertise of the members of the highest governance body	Governance (Report of the SB)	79 ff.
4.8	Internally developed statements of mission or values, codes of conduct and principles	Governance, Strategy	79 ff., 21 ff.
4.9	Procedures of the highest governance body for overseeing the economic, environmental and social performance	Governance (Report of the SB)	79 ff.
4.10	Processes for evaluating the highest governance body's own performance	Governance (Report of the SB)	79 ff.
4.11	Addressing the precautionary principle	-	-
4.12	Externally developed economic, environmental and social initiatives	Results in the fields of safety, the environment and supply chain responsibility (Supply chain management)	43 ff.
4.13	Memberships in associations and/or international advocacy organisations	Results in the fields of safety, the environment and supply chain responsibility (Supply chain management)	43 ff.
4.14	Stakeholder groups engaged by the organisation	Gasunie in society (Relationship with stakeholders)	65 ff.
4.16	Approaches to stakeholder engagement	Gasunie in society (Relationship with stakeholders)	65 ff.
4.17	Topics and concerns that have been raised through stakeholder engagement	Gasunie in society (Relationship with stakeholders)	65 ff.
Economic			
Indicator	Description	Reference	Page
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments	Consolidated financial statements	100 ff.
EC2	Financial implications and other risks and opportunities for the organisation's activities due to climate change	Results in the fields of safety, the environment and supply chain responsibility (Environmental performance, Supply Chain Management)	43 ff.

EC3	Coverage of pension obligations	Consolidated financial statements	100 ff.
EC4	Significant financial assistance received from the government	-	-

Environmental			
Indicator	Description	Reference	Page
EN1	Materials used by weight or volume	-	-
EN3	Direct energy consumption by primary energy source	Results in the fields of safety, the environment and supply chain responsibility (Environmental performance)	43 ff.
EN5	Energy saved due to conservation and efficiency improvements	Results in the fields of safety, the environment and supply chain responsibility (Environmental performance, Recompression for work on pipelines)	43 ff.
EN6	Initiatives to provide energy-efficient or renewable energy-based products and services, and reductions in energy requirements as a result of these initiatives	Our results in 2013 (Transition towards more sustainable use of energy)	27 ff.
EN7	Initiatives resulting in reduction of energy requirements/usage	Our results in 2013 (Transition towards more sustainable use of energy)	27 ff.
EN8	Total water withdrawal by source	-	-
EN9	Water sources significantly affected by withdrawal of water	-	-
EN10	Percentage and total volume of water recycled and reused	-	-
EN11	Location and size of the land owned, leased, managed in, or adjacent to, protected areas of high biodiversity value outside protected areas	-	-
EN12	Description of significant impacts of activities, products and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	-	-
EN13	Habitats protected or restored	-	-
EN14	Strategies, current actions and future plans for managing impacts on biodiversity	-	-
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	-	-
EN16	Total direct and indirect greenhouse gas emissions by weight	Results in the fields of safety, the environment and supply chain responsibility (Environmental performance), Annex IV Data regarding safety, the environment and supply chain responsibility	43 ff.
EN17	Other relevant greenhouse gas emissions	Annex IV: Data regarding safety, the environment and supply chain responsibility (The environment)	199 ff.

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EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved	Results in the fields of safety, the environment and supply chain responsibility (Environmental performance)	43 ff.
EN19	Emissions of ozone-depleting substances by weight	Annex IV: Data regarding safety, the environment and supply chain responsibility (The environment)	199 ff.
EN20	NO <sub>x</sub> , SO <sub>x</sub> and other significant air emissions by type and weight	Annex IV: Data regarding safety, the environment and supply chain responsibility (The environment)	199 ff.
EN21	Total water discharge by quality and destination	-	-
EN22	Total weight of waste by type and disposal method	Results in the fields of safety, the environment and chain responsibility (Environmental performance)	43 ff.
EN23	Total number and volume of significant spills	Results in the fields of safety, the environment and chain responsibility (Environmental performance), Annex IV: Data regarding safety, the environment and supply chain responsibility (The environment)	43 ff., 199 ff.
EN24	Weight of transported, imported, exported or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III and VIII, and percentage of transported waste shipped internationally	Results in the fields of safety, the environment and supply chain responsibility (Environmental performance)	43 ff.
EN25	Identity, size, protected status and biodiversity value of water bodies and related habitats significantly affected by the reporting organisation's discharges of water and runoff	-	-
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	-	-
EN27	Percentage of products sold and their packaging materials that are reclaimed by category	-	-
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	Annex IV: Data regarding safety, the environment and supply chain responsibility (The environment)	199 ff.
EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	-	-
EN30	Total environmental protection expenditures and investments by type	-	-

Labour practices and decent work			
Indicator	Description	Reference	Page
LA1	Total workforce by employment type, employment contract and region, broken down by gender	Employees	57 ff.
LA2	Total number and rate of new employee hires and employee turnover by age group, gender and region	Employees	57 ff.
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	-	-
LA4	Percentage of employees covered by collective labour agreements	Employees (Terms of employment)	
LA5	Minimum notice period regarding operational changes	-	-
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees	-	-
LA7	Rates of injury, occupational diseases, lost days and absenteeism, and number of work-related fatalities by region and by gender	Annex IV: Data regarding safety, the environment and supply chain responsibility (Health indicators table)	199 ff.
LA8	Education, training, counselling, prevention and risk-control programmes	Employees (Organisational development)	57 ff.
LA9	Health and safety topics covered in formal agreements with trade unions	-	-
LA10	Average hours of training per year per employee	Employees (Organisational development)	57 ff.
LA11	Programmes for skills management and lifelong learning	Employees (Sustainable employability)	57 ff.
LA12	Percentage of employees receiving regular performance and career development reviews	Employees (Performance and career development)	57 ff.
LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership and other indicators of diversity	-	-
LA14	Ratio of basic salary of women to men	Employees (Terms of employment)	57 ff.
LA15	Return to work after parental leave, by gender	-	-
Human rights			
Indicator	Description	Reference	Page
HR1	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns	-	-
HR2	Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening, and actions taken	-	-
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights	-	-
HR4	Total number of incidents of discrimination and corrective actions taken	-	-

HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights	-	-
HR6	Operations identified as having significant risk for incidents of child labour, and measures taken to contribute to the effective abolition of child labour	Results in the fields of safety, the environment and supply chain responsibility (Environmental performance, waste management)	43 ff.
HR7	Operations identified as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of all forms of forced or compulsory labour	-	-
HR8	Percentage of security personnel trained in the organisation's policies or procedures, concerning aspects of human rights that are relevant to operations	-	-
HR9	Total number of incidents of violations involving rights of indigenous people, and actions taken	-	-
HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments	-	-
HR11	Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms	-	-
<b>Society</b>			
<b>Indicator</b>	<b>Description</b>	<b>Reference</b>	<b>Page</b>
SO1	Percentage of operations with implemented local community engagement, impact assessments and development programmes	-	-
SO2	Percentage and total number of business units analysed for risks related to corruption	-	-
SO3	Percentage of employees trained in the organisation's anti-corruption policies and procedures	Employees (Code of Conduct)	57 ff.
SO4	Actions taken in response to corruption	Employees (Code of Conduct)	57 ff.
SO5	Public policy positions and participation in public policy development and lobbying	Foreword by the EB, Strategy	5 ff.
SO6	Total value of financial and in-kind contributions to political parties, politicians and related institutions, by country	-	-
SO7	Total number of legal actions for anti-competitive behaviour, anti-trust and monopoly practices and their outcomes	-	-
SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	Annex IV: Data regarding safety, the environment and supply chain responsibility (Financial penalties)	207
SO9	Operations with significant potential or actual negative impacts on local communities	-	-
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities	-	-

Product responsibility			
Indicator	Description	Reference	Page
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures	-	-
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes	-	-
PR3	Type of product and service information required by procedures	-	-
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes	-	-
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	Gasunie in society (Stakeholder feedback)	65 ff.
PR6	Programmes for adherence to laws, standards and voluntary codes concerning marketing communications	-	-
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion and sponsorship, by type of outcomes	-	-
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	-	-
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	Annex IV: Data regarding safety, the environment and supply chain responsibility (Financial penalties)	199 ff.



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