

Sustainability

NON-FINANCIAL REPORT

Introduction

With this separate Non-Financial Report (NFR), Aurubis fulfills its obligation to disclose non-financial information for fiscal year 2017/18 pursuant to Sections 315b and 315c in conjunction with Sections 289c to 289e of the German Commercial Code (HGB).

At Aurubis, sustainability is a significant part of our conduct and therefore plays a key role in our activities. A responsible approach to employees, suppliers, customers, and neighbors is a matter of course for us, whether in direct business operations or in the surrounding areas. The same applies to our environment, as we are aware of the limits of natural resources and want to keep negative impacts from our business activities to a minimum.

When introducing our company Vision in 2017, we established the objective of developing Aurubis from a copper producer to a multi-metal group by 2025. The Vision is summarized with the phrases **“Passion for metallurgy. Metals for progress. Together with you.”** To advance this transformation process, we revised our Group strategy in the same year. It comprises three areas: Growth, Efficiency, and Responsibility. Sustainability is an integral component of the Group strategy, which illustrates the high priority placed on responsible corporate governance at Aurubis.

We aim to enhance our sustainability achievements continuously, beyond the legal requirements. One contribution to this goal is the implementation of the Aurubis Sustainability Strategy, which outlines the action areas for the coming years.

We make our sustainability achievements transparent in a variety of ways. These include participation in sustainability rankings, active dialogue with the related agencies, involvement in the CDP (formerly the Carbon Disclosure Project) [Q Glossary, page 182](#), and the voluntary reporting of the past several years. This reporting is oriented to the reporting standard of the Global Reporting Initiative (GRI) [Q Glossary, page 182](#), as well as the Mining and Metals Sector Disclosures. In this separate Non-Financial Report, we use the GRI Sustainability Reporting Standards as a guide in describing the concepts and selected KPIs. We plan to continue our comprehensive reporting in accordance with GRI for 2019.

We communicate regularly with our key stakeholders about sustainability-related topics. We believe it is important to maintain a dialogue with employees, customers, suppliers, politics and society, capital market participants, the media, non-governmental organizations, and the scientific community.

Aurubis AG is the parent company of the Aurubis Group and is based in Hamburg, with production sites in Hamburg and Lünen. For us, sustainability applies to the entire Group. Consequently, the action areas and measures are relevant for the Group and for Aurubis AG. The key indicators mentioned in this report are recorded at Aurubis in the individual departments, consolidated at Group level, and ultimately evaluated. When the following report mentions copper production, this refers to primary and secondary copper production [Q Glossary, page 183](#) at the Hamburg, Lünen, Olen, and Pirdop sites. Significant differences between Aurubis AG KPIs and Group KPIs are explained.

The main external factors influencing business development are described in the Risk and Opportunity Report of the Combined Management Report [Q Explanation of relevant risks, pages 87-90](#). Risks related to non-financial aspects beyond the company boundaries are also mentioned there. Risks were assessed in accordance with the German CSR Directive Implementation Act (CSR-RUG) [Q Glossary, page 182](#). In the process, no non-financial risks were identified that were very likely to cause serious negative impacts on employee and environmental matters, on respect for human rights, on the prevention of corruption and bribery, and on social matters according to Section 289c (3) of the German Commercial Code (HGB). Nevertheless, it is important to us to handle non-financial risks even if they are evaluated as non-material according to the strict definition of the CSR Directive Implementation Act. We have developed and implemented related management approaches to address these non-financial risks.

Description of the business model and presentation of the Group structure

We are continuing to develop our business model consistently in alignment with the new company Vision. Today, Aurubis' main focus is on the production and processing of copper. Aurubis primarily processes copper concentrates [Q Glossary, page 182](#) that are mined from ores and sourced on the global market. The company purchases the necessary raw materials, as it doesn't have its own mines or stakes in mines. The processing of secondary raw materials plays an important role as well. Moreover, Aurubis is currently expanding its business model beyond copper and increasingly implementing a multimetal approach. This means that, in addition to copper, other metals will be extracted from systematically purchased raw materials and intermediate products and then processed into marketable products with added value.

More information is available in the Business Model chapter of the Combined Management Report. [Q Pages 56-59](#)

Aurubis Sustainability Strategy, its aspects, and explanation of their relevance

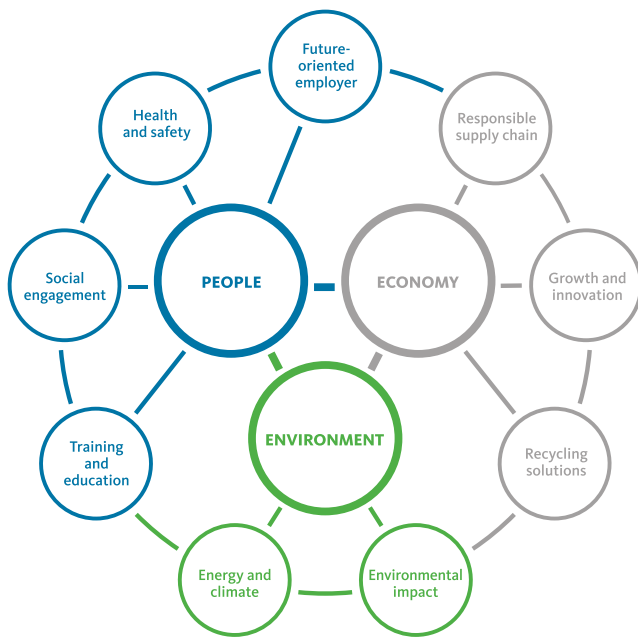
SUSTAINABILITY STRATEGY

Aurubis first developed a Sustainability Strategy in 2013. The first strategy expired in calendar year 2018 after a runtime of five years. In fall 2015, the main action areas of this strategy were reviewed to determine their relevance, refined, and developed in the course of a materiality analysis. Internal and external stakeholders from eight stakeholder groups relevant to Aurubis were surveyed for this purpose. Furthermore, managers from all company divisions carried out the analysis.

In July 2017, we started the process to develop the Sustainability Strategy further. The process was broken down into two phases. The first phase was the analysis of the internal and external requirements and the current developments. With the support of the relevant departments, Aurubis determines its status quo, potential for improvement, and areas that require attention. In the development phase, the information was assessed and the key topics from the 2015 materiality matrix were reviewed to determine whether they were up-to-date and possibly needed to be shifted. Concrete targets and measures were developed in workshops from the insights that were gained, which included a new classification of some of the relevant topics. The representatives of the relevant departments were divided into three working groups corresponding to Aurubis' interplay of the economy, the environment, and people.

During the reporting period, the Aurubis Executive Board and Supervisory Board passed the Sustainability Strategy 2018–2023. It comprises the main areas of activity for the next five years. In turn, these areas include a total of 27 measures and nine targets. We established deadlines and KPIs for their implementation so that our sustainable company development can be measured and guided.

Aurubis Sustainability Strategy



DERIVING THE KEY TOPICS PURSUANT TO THE CSR DIRECTIVE IMPLEMENTATION ACT

When selecting the aspects for the Non-Financial Report, we were guided by both the main action areas of the company's Sustainability Strategy and the non-financial topics that are required to understand the business development, the business result, the company's position, and the impacts of our activities on these aspects. We also assume corporate responsibility in those instances in which the topics don't directly influence our business development but are of considerable importance for us and our stakeholders. This is why the topic of social matters is part of our report and labeled as such.

Moreover, the topics from the materiality analysis from 2015 [Q Sustainability Strategy, page 35](#) were reviewed with regard to the materiality requirements from the CSR Directive Implementation Act. In summer 2018, managers from five Aurubis divisions (Corporate Accounting & Consolidation, Investor Relations, Controlling/Risk Management, and Sustainability) evaluated whether the topic clusters identified in 2015 and in the Sustainability Strategy 2018–2023 are material according to the CSR Implementation Act as well. The topics identified as material in this process are assigned to the action areas of the Aurubis Sustainability Strategy in this Non-Financial Report. We present topics that have the same management approach in a consolidated format.

ASPECTS RELEVANT FOR AURUBIS

In the Non-Financial Report, we describe the five aspects of **employee-related matters, environmental matters, respect for human rights, the prevention of corruption and bribery, and social matters.**

For us, the three areas of health and safety, future-oriented employer, and training and education are highly relevant and are included in the reporting in the aspect **employee-related matters**. As a responsible employer, it is a matter of course for Aurubis to take measures to maintain our employees' health and performance and to protect them from accidents and illness. Aurubis' HR strategy helps address future challenges in HR policy and thus contributes to the successful implementation of the Aurubis strategy. It is therefore a key element on the path to Vision 2025. Additional contributions to safeguarding long-term success include the high-quality training at Aurubis and investments in our employees' qualifications.

As a production company in the non-ferrous metals industry, **environmental matters** have always been extremely important at Aurubis, which is also reflected in our Sustainability Strategy. We assume responsibility for the effects of our activities on the environment and the climate. As an energy-intensive company, we view the effective and efficient use of energy and the

reduction of CO₂ emissions as issues of ecological and economic responsibility. We strive to fulfill high environmental protection standards at the production sites and beyond our business processes by using modern, energy-efficient plant technology.

With multi-metal recycling, Aurubis makes a vital contribution to the circular economy and thus to the conservation of natural resources.

The careful treatment of the environment and resources, as well as a responsible approach to employees, suppliers, customers, and neighbors are an expression of good corporate governance, which is important to Aurubis. The same applies to the areas surrounding our sites. **Respect for human rights** is gaining significance in light of the fact that we are active beyond our plant boundaries, in complex supply chains and on global markets. Compliance with the core labor standards of the International Labour Organization (ILO), including the topic of human rights, is of fundamental significance for Aurubis. This is true for both Aurubis and for the selection of our business partners.

With respect to responsible corporate governance at Aurubis, the legal framework, corporate values, and internal policies ensure that our conduct is legally sound and that our communication with colleagues and stakeholders is fair and trusting. Our Compliance Management concentrates on the **prevention of corruption and bribery** in particular. This is reflected in our participation in the United Nations Global Compact, which Aurubis joined in 2014. With this initiative, we make a commitment to the implementation of the principles of human rights, labor standards, environmental protection, and anti-corruption.

Social commitment¹ is a component of Aurubis' company identity and part of its Sustainability Strategy. Our activities in this regard are described within the **social matters** aspect in the Non-Financial Report. We are aware of the responsibility associated with our business activities – as an employer, as a business partner, as a neighbor, and as part of society.

¹ Topic not material for Aurubis within the meaning of the CSR Directive Implementation Act (CSR-RUG).

Overview of material topics

		Material according to CSR Directive Implementation Act	Material for Aurubis	Page in NFR
Employee-related matters	Future-oriented employer	✓	✓	Q 38
	Training and education	✓	✓	Q 39
	Health and safety	✓	✓	Q 41
Environmental matters	Energy and climate	✓	✓	Q 41
	Environmental impact	✓	✓	Q 43
	Recycling solutions	✓	✓	Q 44
Social matters	Societal engagement		✓	Q 45
Human rights	Responsible supply chain	✓	✓	Q 46
Anti-corruption	Anti-corruption	✓	✓	Q 47

EMPLOYEE-RELATED MATTERS

Future-oriented employer

Competent, productive, and enthusiastic employees form the basis of the Aurubis Group's commercial success and further development.

We have set the targets of creating a work environment for good, close cooperation and promoting involvement and creativity. We form a team that passionately works toward the company's progress.

Good cooperation between our employees and the company management is the basis for the Group's success. All employees are informed regularly and promptly about current developments. We are committed to employee participation in decision-making. On the corporate level, the Executive Board and Supervisory Board, in which the staff is also represented, work closely together as the highest governing bodies. On the plant level, the interests of the employees are represented by works councils/ unions according to the country-specific regulations. An elected European Works Council has been in place at Aurubis since 2009 and covers all of the European sites. Our membership in the UN Global Compact [Q Glossary, page 183](#) underlines our commitment to the ILO core labor standards [Q Glossary, page 182](#).

With the help of our Business Partner Screening, we analyze employees' concerns along our products' value chain, including beyond the company boundaries. [Q Human rights, pages 46-47](#)

All group-wide activities related to our employees are managed at Group level by HR Corporate. This department is particularly involved with implementing and monitoring strategic HR tools and supporting change processes and internationalization. Direct supervisors and the local HR departments at the sites are responsible for employees' supervision, performance assessments, and development planning. Their on-site HR work is oriented toward the standards of the central HR division.

Our HR strategy is embedded in the Group strategy and is guided by our corporate values. It is developed continuously. In the process, internal changes, in addition to changes and trends on the labor markets and in society, are taken into account. For example, these include a lack of qualified workers due to the demographic

shift, as well as the search for apprentices, which is becoming more and more difficult. To address these challenges, we offer our employees an attractive work environment and prioritize a balance between work and free time, good cooperation between our employees and company management, and competitive, gender-neutral compensation. Most of Aurubis' employees are paid in accordance with collective agreements. We are keen to promote diversity in the workplace. This includes not only cultural differences and international composition, but also professional skills, age groups, and a balance between genders.

Among the feedback tools used at Aurubis is the Organizational Health Index (OHI). The OHI was last issued in 2016. The OHI indicates the "health" of a company, e.g., how well a company is equipped to react to changes in the market and thus to achieve economic success sustainably. Key influencing variables include leadership skills, innovation, and willingness to learn, as well as company culture and climate. In 2017, we started a 360° feedback program based on the results, a tool for constructive feedback for managers. Personal developmental targets and measures are derived from this program in order to sustainably improve managerial performance.

We steadily develop our working time models in line with our employees' needs. We strive to make flexible working time arrangements, as long as this is consistent with the individual work area.

Key measures of the Sustainability Strategy 2018–2023 and their status in fiscal year 2017/18

- » *Improving the "health" (OHI) of the organization with strategically aligned HR instruments and services, as well as individual development tools*

The Transformation and Business Improvement department was set up in early 2017. The department's Business Improvement Guides support internal projects and the implementation of the Aurubis Operating System (AOS) [Q Glossary, page 182](#) as internal consultants. AOS is a management system for achieving continuous and sustainable process improvement. Programs introduced in the last several years, such as a workshop series to develop managers' skills, continued during the reporting period.

- » Regularly identifying employees' needs with respect to working time arrangements

The flex time program was developed further during the reporting period. Furthermore, a new shift model was initiated. A new planning process for personnel placement enables better shift planning. The home office and mobile work options were expanded.

- » Developing a diversity policy

As part of the reorganization and AOS, international teams are already working together. The development of a diversity policy (including age structure, international character, and gender distribution) is planned for the coming years.

KPIs:

Aurubis Group personnel structure

(FY 2017/18 as at the reporting date September 30, 2018)

	Employees	Female	Male
Aurubis Group ¹	6,673	12 %	88 %
Blue collar	4,130	4 %	96 %
White collar	2,256	28 %	72 %
Apprentices (including Pirdop)	287	10 %	90 %

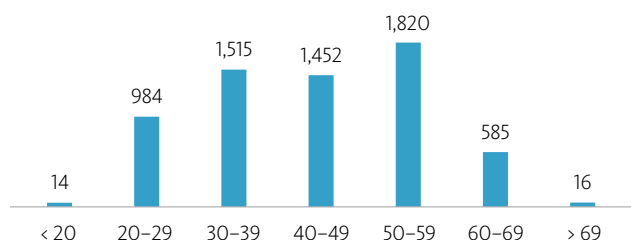
¹ Permanent and temporary employment arrangements. Excluding Schwermetall Halbzeugwerk GmbH & Co. KG, in which Aurubis holds a 50% stake. In addition to the fully consolidated companies, this table includes the employees of the non-consolidated companies Aurubis Metal Products (Shanghai) Co., Ltd., Aurubis Rus LLC (St. Petersburg), Aurubis Middle East FZE (Dubai), and Aurubis Turkey Kimya Anonim Sirketi (Istanbul), which had a combined total of twelve employees in fiscal year 2017/18. It also includes eleven independent sales employees at international sites [Q Sites and employees, page 57](#).

Employee fluctuation in the Aurubis Group (FY 2017/18 as at the reporting date September 30, 2018)

Fluctuation rate (excluding apprentices) ¹	6.6 %
Average length of employment in the company (excluding apprentices) ¹	15.3 years

¹ Permanent and temporary employment arrangements. Excluding Schwermetall Halbzeugwerk GmbH & Co. KG, in which Aurubis holds a 50% stake. In addition to the fully consolidated companies, this table includes the employees of the non-consolidated companies Aurubis Metal Products (Shanghai) Co., Ltd., Aurubis Rus LLC (St. Petersburg), Aurubis Middle East FZE (Dubai), and Aurubis Turkey Kimya Anonim Sirketi (Istanbul), which had a combined total of twelve employees in fiscal year 2017/18. It also includes eleven independent sales employees at international sites [Q Sites and employees, page 57](#).

Age structure¹



¹ Not including apprentices.

Training and education

In order to achieve our vision and advance our strategy, we rely on a learning organization. The targeted personal development of our employees has high priority.

The HR Development department is responsible for staff development. It supports the other departments, in close coordination with the local HR managers, in building employees' skills in a directed way tailored to their needs. The objective is to meet current and future requirements and challenges. HR Development and vocational training are part of the HR Corporate department.

To fulfill future personnel requirements, we regularly assess demand for specific skills and trades, and offer apprenticeships accordingly. Qualification needs are also regularly identified to expand project, process, and management expertise in a targeted way.

We have developed and adjusted the training offerings in our leadership and qualification program according to the Group's needs. In particular, options for managers at the foreman level were a top priority. Employees are offered a number of technical training measures.

In addition to qualification and development programs geared to necessary skills, for example, in the areas of the AOS and in project management, we also rely on platforms for networking and discussing best practices (e.g., expert panels and online learning groups). We also offer shorter formats for flexible skill enhancement, such as the "Learn & Go" program on the intranet and video learning options.

We are proud of our high training and retention rate. This ensures that we have a sufficient number of qualified employees. At our site in Pirdop, Bulgaria, we implemented a vocational training program based on the Swiss training model.

Aurubis Hamburg has participated in the internship model AV 10-Plus since 2007. The model supports young people from a range of occupational groups, helping them to gain the qualifications required to begin apprenticeships. In 2017/18, five of the eleven participants took on an apprenticeship at Aurubis. The remaining participants started external apprenticeships or have now gone on to higher education.

Recently, we invested in the construction of two modern vocational training centers in Lünen and Hamburg. In Lünen, the building next to the Training Workshop will also be home to the Occupational Safety and Technology divisions, while in Hamburg, Training and Research & Development (R&D) will be located in the Innovation and Training Center. The shared building emphasizes the even stronger linkage between R&D and vocational training in the future.

Furthermore, we cooperate with partner universities, offer internships to students in Germany, and provide thesis projects and scholarships.

Key measures of the Sustainability Strategy 2018–2023 and their status in fiscal year 2017/18

- » *Regularly identifying qualification needs to expand project, process, and management expertise in a targeted way*
In fiscal year 2017/18, a 360° feedback process was introduced for the Executive Board and the first and second management levels, and a group-wide performance management system was established for the employees.
- » *Start of the group-wide introduction of the AOS pillar "Education and Training"*
During the reporting year, basic AOS courses were carried out and the pilot phase for AOS e-learning was prepared.
- » *Developing group-wide knowledge management to identify, preserve, transfer, and enhance knowledge across functions*
The necessary personnel resources were provided during the reporting period. A structured process was drafted and the pilot phase for group-wide knowledge management started.

KPIs:

Training and education KPIs in FY 2017/18

Apprenticeship rate in Germany	6.3%
Apprentice retention rate in Germany	80%
Average number of training hours per employee ¹	
Aurubis Group	11.52
Blue collar	9.69
White collar	15.07

¹ Permanent and temporary employment arrangements. Excluding Schwermetall Halbzeugwerk GmbH & Co. KG, in which Aurubis holds a 50% stake. In addition to the fully consolidated companies, this table includes the employees of the non-consolidated companies Aurubis Metal Products (Shanghai) Co., Ltd., Aurubis Rus LLC (St. Petersburg), Aurubis Middle East FZE (Dubai), and Aurubis Turkey Kimya Anonim Sirketi (Istanbul), which had a combined total of twelve employees in fiscal year 2017/18. It also includes eleven independent sales employees at international sites [Q Sites and employees, page 57](#).

Health and safety

The responsibility of Corporate Occupational Health and Safety is to create conditions that prevent all work-related accidents and illnesses. This applies for our employees, temporary workers, and external service providers.

In the long term, we want to achieve our Vision Zero, that is, to reduce work-related accidents, injuries, and illnesses to zero. Our goal for the medium term is to reduce the number of work-related accidents with at least one lost shift per one million hours worked (lost time injury frequency rate, LTIFR) [Q Glossary, page 183](#) to ≤ 1.0 by 2022.

The department Corporate Occupational Health and Safety (C-OHS) manages occupational safety and health. The corporate department establishes minimum occupational safety standards for the entire Group by issuing process instructions in addition to the Corporate Policy on Occupational Health and Safety. The individual sites are responsible for the detailed implementation, which is overseen by the plant managers. The sites are in contact with each other via an organized network. Safety steering committees are installed at Group and site level, with the members representing the entire staff.

We rely on occupational safety-related risk management to assess hazards. Tools such as process safety analyses, risk assessments, and workspace analyses help us to understand and control potential dangers. Health check-ups are offered when new employees are hired, with routine occupational health check-ups provided thereafter. Training and safety talks sensitize employees to occupational safety topics and encourage them to use this knowledge safely in practice.

In addition, we support employees in taking preventive measures to maintain their health. Our offerings in this respect extend from flu vaccinations and medical check-ups to addiction prevention, as well as intensive training for the stomach and back muscles based on analyses.

Key measures of the Sustainability Strategy 2018–2023 and their status in fiscal year 2017/18

- » *Preparing all sites for the introduction of the ISO 45001 standard for occupational health and safety (by fiscal year 2019/20)*
This project kicked off during the Health & Safety group meeting in fiscal year 2017/18.
- » *Implementing Behavior-Based Safety across the Group (by fiscal year 2020/21)*
Behavior-Based Safety was initiated at our sites in Emmerich, Hamburg, Pori, and Stolberg in the reporting period.

KPIs:

Occupational health and safety KPIs

	FY 13/14	FY 14/15	FY 15/16	FY 16/17	FY 17/18
Absolute number of accidents	80	63	45	47	60
LTIFR	6.5	5.3	4.6	4.8	6.1

Permanent and temporary employment arrangements. Excluding sales offices in Chicago, Lyon/Septème, and Barcelona, which have a total of nine employees, and excluding Schwermetall Halbzeugwerk GmbH & Co. KG, in which Aurubis holds a 50% stake.

ENVIRONMENTAL MATTERS

Energy and climate

The individual production steps in our value chain are energy-intensive. For us, the efficient use of energy is an issue of ecological and economic responsibility.

Energy consumption is the main source of CO₂ emissions in the Group. To prevent CO₂ emissions, we focus on energy efficiency measures first and foremost. Taking the entire value chain into consideration, about half of the CO₂ emissions are upstream and downstream, i.e., they originate from our suppliers, customers, and service providers (Scope 3 emissions). Of the Scope 3 emissions, about two-thirds originate from the activities of mining companies. We voluntarily report our CO₂ emissions, including the Scope 3 emissions, annually as part of the CDP Climate Change Program. CDP gathers and evaluates data and information about companies' CO₂ emissions, climate risks, and reduction targets and strategies [Q Human rights, pages 46-47](#).

The metals we produce play a key role when it comes to renewable energies and e-mobility. Electric cars and wind energy are two examples. Electric cars contain significantly more copper than vehicles with conventional combustion engines, and connecting an offshore wind turbine to the energy grid requires up to 30 t of copper. Our metals therefore make a considerable contribution to technologies that reduce CO₂ emissions.

The Energy & Climate Affairs department coordinates the development of the energy management and monitoring systems across the Group. In this way, they provide for a uniform approach and facilitate the exchange of expertise regarding best practice examples, e.g., in the form of an internal energy efficiency network. The management of Corporate Energy & Climate Affairs develops and implements the group-wide energy strategy and reports directly to the Executive Board.

We have introduced energy management systems at our large production sites. Currently, eight sites are certified in accordance with ISO 50001 [Q Glossary, page 182](#) [Q Table, page 43](#). The plan is to introduce these systems across the Group. They help manage energy consumption efficiently and identify potential energy savings. During the reporting period, the certifications were confirmed through routine surveillance visits or recertification. The energy management system at the Hamburg and Lünen sites is part of the integrated management system for quality, environmental protection, energy, and occupational safety.

The more steps that have already been implemented in energy efficiency in the past, the more challenging it is to optimize energy demand further. Moreover, because there are limits to reducing energy consumption and emissions, the improvements being achieved today are only marginal compared to previous years. This is despite continued high levels of investment. For example, the use of complex recycling raw materials with comparably low metal contents requires more energy to be processed. Environmental protection already accounts for part of the energy consumption at Aurubis today. This includes the operation of facilities such as filters with fans and other suctioning equipment. For Aurubis, it is important to align environmental protection, resource conservation, and energy efficiency.

The use of renewable energies is a challenge for us since using them is associated with energy supply fluctuations. However, our production processes require a constant energy supply. We are working on initiatives to make our energy needs more flexible in order to enable the use of renewables. At the same time, we also generate energy by using the waste heat from our processes to supplement the heat and process steam supply and, in some cases, to produce electricity internally.

Key measures of the Sustainability Strategy 2018–2023 and their status in fiscal year 2017/18

- » *Introducing the ISO 50001 standard for energy management across the Group*
Eight sites are currently certified in accordance with ISO 50001 [Q Sites with certified management systems, page 43](#).
- » *Increasing flexibility in electricity purchasing*
To enable the use of renewable energies, we are arranging a more flexible electricity feed-in to be able to react to fluctuating availability. We are participating in the project NEW 4.0, among others, which is funded by the German Federal Ministry for Economic Affairs and Energy. The goal of the project is to supply the entire region of Hamburg and Schleswig-Holstein with regenerative electricity in a safe, cost-effective, and environmentally sound manner. This calls for a flexible and intelligent network of electricity producers and consumers.
- » *Energy efficiency projects*
The heat and process steam supply at the Pirdop, Lünen, and Hamburg sites is already covered by waste heat to a great extent. We also use process waste heat to produce electricity within the company. Steam turbines were installed for this purpose in Hamburg, Lünen, and Pirdop. In calendar year 2018, Hamburg's HafenCity East neighborhood began receiving CO₂-free industrial heat from the Aurubis plant in Hamburg. Each year, about 160 million kWh of heat is extracted from the processes, equivalent to a more than 20,000 t reduction in CO₂ annually. Roughly half of this reduction comes from saving the natural gas that was previously required to produce steam on the plant premises. The other half of the CO₂ reduction comes from the transmission of external heat to the HafenCity East neighborhood, which replaces the conventional fuels used to generate district heating.

KPIs:**Absolute CO₂ emissions in 1,000 t of CO₂ at the Aurubis production sites¹**

Year ²	2015	2016	2017
Scope 1 (emissions produced as a direct result of burning fuels in the company's own facilities)	518	520	529
Scope 2 (emissions related to purchased energy, e.g., electricity)	1,197	1,149	1,106

¹ Aurubis reports CO₂ emissions for the production sites [Q Business model of the Group, pages 56-59](#). This reflects most of the CO₂ emissions because the emissions volume at the sales offices are negligible in comparison. Emissions from diesel vehicles are not included in the direct CO₂ emissions. However, they make up a very small percentage compared to other sources.

² Aurubis reports its environmental KPIs (including CO₂ emissions) based on the calendar year, not the fiscal year. The KPIs are used first and foremost for internal management purposes and reporting for governmental authorities, for which the calendar year is the given period under review. Parallel reporting of both calendar year and fiscal year figures could lead to confusion and ambiguity.

Sites with certified management systems

Site	EMAS	ISO 14001	ISO 50001	ISO 9001
Hamburg, headquarters (DE)	✓	✓	✓	✓
Lünen (DE)	✓	✓	✓	✓
Pirdop (BG)		✓		✓
Olen (BE)		✓		✓
Fehrbellin, CABLO (DE)		✓	✓	✓
Nersingen, Strass, CABLO (DE)		✓	✓	✓
Hamburg, E. R. N. (DE)		✓	✓	✓
Buffalo (USA)				✓
Pori (FI)		✓		✓
Avellino (IT)		✓		✓
Zutphen (NL)		✓		✓
Stolberg (DE)			✓	✓
Emmerich, Deutsche Giessdraht (DE)		✓	✓	✓
Stolberg, Schwermetall (DE)	✓	✓	✓	✓
Röthenbach, RETORTE (DE)				✓
Hamburg, Peute Baustoff (DE)				✓ ¹

¹ For the sale of iron silicate granules used to produce blasting abrasives.

Protection from environmental impact

As a producer of copper and other metals, we are aware of our environmental responsibility. We have therefore set ourselves the target of conserving resources and maintaining a clean environment for future generations. This applies not only to our own processes, but to those along the value chain as well [Q Human rights, pages 46-47](#).

The Chief Operating Officer and Corporate Environmental Protection management are responsible for the strategic positioning of environmental protection in the Group. Environmental officers oversee the environmental protection duties at the individual production sites [Q Sites and employees, page 57](#) and report to Corporate Environmental Protection management.

The principles of our Company Environmental Protection Guidelines provide a framework for safeguarding our uniform, group-wide environmental standards. They are enshrined in the Corporate Policy on Environmental Protection. We have set group-wide targets in environmental protection. We implement corresponding local measures at the production sites to achieve these targets. Environmental performance is monitored and controlled using key environmental parameters, which are regularly recorded at the production sites and verified by external inspectors.

Most of our sites have environmental management systems in accordance with ISO 14001/EMAS [Q Glossary, page 182](#) [Q Sites with certified management systems, page 43](#). At the Hamburg and Lünen sites, these are part of the integrated management system for quality, environmental protection, energy, and occupational safety. During the reporting period, the certifications were confirmed through routine surveillance visits or recertification.

In addition to fulfilling legal requirements, the management systems help us improve our environmental performance. They assist us in recognizing potential improvements and, in the case of deviations from specified targets, in initiating corrective actions. We continuously inform our employees about all environmental and energy-related topics and train them accordingly. Moreover, emergency drills are carried out regularly.

Our goal is to keep our emissions to the environment to a minimum. And our efforts are paying off, with specific dust emissions for primary and secondary copper production having been reduced by 96% compared to the reference year 2000. In addition to reducing emissions to air, we have also made significant improvements in water pollution control, reducing metal emissions to water in copper production processes from 7.2 to 1.0 grams per ton of copper output since 2000. This is a decline of 87%.

Dialogue with governmental authorities and the public is important to us, which is why we are involved in public projects. For example, since 2013 we have participated in the EU projects Organizational Environmental Footprint and Product Environmental Footprint, which seek to achieve an environmental balance in organizations and products.

Key measures of the Sustainability Strategy 2018–2023 and their status in fiscal year 2017/18

- » *Introducing the ISO 14001 standard for environmental management across the Group*
Twelve sites were certified in accordance with ISO 14001 in fiscal year 2017/18 [Q Sites with certified management systems, page 43](#).
- » *Reducing specific metal emissions to water in multi-metal production with site-specific projects and individual measures*
- » *Reducing specific dust emissions to air in multi-metal production with site-specific projects and individual measures*
For example, the adjustment of the converter slag handling process has started at the Bulgarian site in Pirdop. This project contributes to a further reduction in fugitive emissions.
- » *Reducing specific SO₂ emissions to air with planned site-specific projects and individual measures*

KPIs:

Specific emissions in Aurubis Group copper production (in g/t of copper output)

	2012	2013	2014	2015	2016	2017
Dust emissions ¹	72	52	55	55	60	56
Metal emissions to water ²	2.2	1.8	1.3	1.0	1.1	1.0

Aurubis reports its environmental KPIs (including CO₂ emissions) on a calendar year basis, not on a fiscal year basis. The KPIs are used first and foremost for internal management purposes and reporting for governmental authorities, for which the calendar year is the given period under review. Parallel reporting of both calendar year and fiscal year figures could lead to confusion and ambiguity.

¹ The KPIs relate to the copper production sites, i.e., to primary and secondary copper production at the Hamburg, Lünen, Olen, and Pirdop sites.

² In our reporting, we refer to the copper production sites that discharge directly into water. These sites are Hamburg, Olen, and Pirdop. In Lünen, wastewater is directed to the public sewer system after being treated on the plant premises.

Recycling solutions

We invest in our multi-metal recycling and, in this way, contribute to a circular economy and thus to the conservation of natural resources beyond our key expertise in copper recycling.

In addition to the processing of copper concentrates, the recycling of copper scrap, copper alloy scrap, and many other recycling materials [Q Glossary, page 183](#) is a key business area at Aurubis. Copper is a metal that can be recycled as often as desired without a loss of quality. This means that copper of the highest purity can be produced from recycling materials again and again.

Among the secondary raw materials we process are complex materials [Q Glossary, page 182](#) at the end of the product life cycle. These come from sources such as electronic devices, vehicles, and other items used daily that are made of materials like plastic, ceramic, glass, and wood. Separating them into material and product streams by type in order to reuse them is a significant challenge. We utilize highly developed mechanical, physical, and metallurgical separating and refining processes in different combinations for this purpose as part of our multi-metal recycling.

Our Commercial division is responsible for sourcing recycling materials for the Group. This is divided into the areas Recycling Raw Materials, Product Sales & Marketing, and Customer Scrap Solutions. This structure is in keeping with our recycling approach, which sees us use secondary materials as raw materials and take metal return options into account in product marketing and in our customer relationships.

The processing industry is part of both our customer base and our supplier base. Production residues accumulate during these companies' production processes. These residues include materials with very high copper contents, such as Millberry scrap, which can be used again immediately as input material in copper production. However, stamping waste containing precious metals and high levels of copper, alloyed scrap, slags from foundries, and other industrial residues are fed back into the valuable material cycle in a meaningful way.

As part of our "closing-the-loop" activities, we build up partnerships through which we take back valuable materials from our customers.

Aurubis fabricates products made of recycling materials at different sites. The management of these sites reports to the Chief Operating Officer or, in the case of the subsidiaries CABLO and Elektro-Recycling Nord (E.R.N.), to the head of the Commercial division as well. Recycling raw materials are the primary feedstock used to fabricate cathode copper at our largest recycling plant, the Aurubis recycling center in Lünen. The Hamburg, Pirdop, and Olen sites also process recycling raw materials to produce cathode copper and precious metals. The Aurubis subsidiary CABLO specializes in recycling cable production waste and end-of-life cable scrap. E.R.N. specializes in recycling electrical and electronic devices of all kinds.

The Aurubis plant in Lünen is certified by TÜV Nord in accordance with the WEEE [Glossary, page 183](#) End Processor Standard. This is a voluntary standard for the processing of precious metal-bearing WEEE materials such as circuit boards. Aurubis helped develop the standard and thus contributes to internationally organized recycling and disposal processes. Together with 22 national and international partners, we are participating in the European research project FORCE – Cities Cooperating for Circular Economy. The project is concerned with developing new concepts to avoid and treat waste from plastics, biomass, wood, and – Hamburg's contribution – end-of-life electrical devices.

Key measures of the Sustainability Strategy 2018–2023 and their status in fiscal year 2017/18

- » *Establishing and developing "closing-the-loop" systems as a result of new or intensified cooperation with original equipment manufacturers (OEMs), retailers, or copper product customers*
From 2013 to the end of fiscal year 2017/18, we set up eleven new closing-the-loop projects. Our objective is to establish additional closing-the-loop systems with direct and indirect product customers.

SOCIAL MATTERS

Societal engagement¹

Societal engagement is a fixed component of our company identity. We fulfill our responsibility within society – as an employer, as a business partner, as a neighbor, and as a member of society – throughout the entire value chain.

We have set the target of contributing to a livable environment for future generations. In the process, we focus on areas of action that are linked with Aurubis' key expertise. As a responsible, committed company, we want to promote enthusiasm for our company and for our work.

¹ Topic not material for Aurubis within the meaning of the CSR Directive Implementation Act (CSR-RUG).

The Event Management & Sponsoring division is responsible for our societal engagement and reports to the Vice President Investor Relations & Corporate Communications. The budget for our societal engagement is supervised in close coordination with the Executive Board. A Sponsoring Policy establishes the relevant responsibilities and describes the criteria used to select the projects. The systematic review of the project partners is a fixed element of the revised Sponsoring Policy. In addition to projects that are supported at Group level, all of the sites have their own budgets for local projects. Overall, our sponsoring commitments concentrate on the areas of knowledge, resource efficiency and environmental protection, and societal engagement, under the overarching focus of responsibility, thus contributing to our company strategy as well. Furthermore, there are local sponsoring projects that account for special regional features at the different sites.

Key measures of the Sustainability Strategy 2018–2023

- » Developing and implementing the sponsoring concept “Together we care” for societal engagement at Group level (by fiscal year 2018/19)

Project examples in the reporting period:

In Hamburg, we support the project “Bridge & Tunnel.” A key aspect of the project is the recycling of reusable materials. Old textiles and leftover material are processed into accessories, clothing, and home textiles in Hamburg-Wilhelmsburg. Bridge & Tunnel creates permanent jobs for people who aren’t employed on the primary labor market due to various reasons and for individuals with an immigration background.

For the first time, we are supporting the Lünen Schulticker project. Schulticker is a media project that strengthens the competent use of print and online media and promotes reading and writing abilities among students in grades three to eleven.

Aurubis Bulgaria supported the renovation of a convent in Zlatitsa during the reporting period. The support provided is part of Aurubis Bulgaria’s local sponsoring strategy of helping restore cultural and historic places in the region in order to develop a local network of tourist destinations. The purpose of this network is to promote regional development.

HUMAN RIGHTS

Aurubis respects human rights and advocates for their protection. We reject any form of discrimination, forced labor, or child labor and respect the rights of indigenous populations. Compliance with the internationally recognized core labor standards of the International Labour Organization (ILO) is of fundamental importance.

In this respect, we have been committed to the principles of the United Nations Global Compact since 2014, and observe both our Code of Conduct and our company values, the latter of which are represented by the acronym PRIMA (Performance, Responsibility, Integrity, Mutability, and Appreciation) [Q Glossary, page 183](#).

Our efforts regarding respect for human rights focus on our supply chain.

Responsible supply chain

In our view, our responsibility to uphold human rights extends into the supply chain. Aurubis sources metal-bearing raw materials worldwide. In some cases, our metals come from countries with a higher risk of human rights violations, non-compliance with social and environmental standards, or corruption. One of our objectives is to manage our global sourcing of primary and secondary raw materials responsibly, taking the respective impact on the social environment, the natural environment, and economic aspects into account.

We have implemented Aurubis Business Partner Screening to fulfill our due diligence obligation. This tool enables us to analyze our business partners' integrity in relation to social and ecological criteria. The focus of the process is on topics such as compliance, corruption, human rights violations, and environmental aspects. Based on this assessment, management decides on possible contracts or restrictions. For existing business partnerships, the analysis is repeated regularly depending on the original risk. The Screening is based on the principles of the OECD. Since 2013, Aurubis' gold production has been annually certified as conflict-free according to the standards of the London Bullion Market Association (LBMA). The certificate verifies the effectiveness of our due diligence process related to gold production. The suppliers of the other raw materials go through the same process as those who supply gold-bearing raw materials.

Key measures of the Sustainability Strategy 2018–2023 and their status in fiscal year 2017/18

- » *Including human rights, environmental protection, and safety clauses¹ in supply contracts for primary raw materials*
During the fiscal year, the percentage of contracts with primary raw material suppliers including the corresponding clause was over 80%.
- » *Review of new and existing business partners by the Compliance and Sustainability departments*
The business partner review is ongoing.
- » *Identifying a suitable sector solution*
During the reporting period, we continued our work in the relevant associations for a uniform sector solution for sustainability in the supply chain.

¹ We expect our business partners to follow not only local laws but also UN sanctions and trade restrictions, as well as UN conventions related to human rights, environmental protection, and safety.

ANTI-CORRUPTION

Corporate governance and the principles of responsible and sustainable company management determine Aurubis' actions. More information is available in the Corporate Governance chapter [Q Corporate Governance, pages 17-33](#).

Anti-corruption measures are established in Aurubis' Compliance Management. Compliance Management forms the basis for observing legal regulations. Our objective is to comply with all legal and company guidelines and policies. Violating the law can have serious consequences – for our employees, for Aurubis as a group, and for our business partners. For us, compliance also means that we act in accordance with ethical principles and our defined company values, as well as with internal corporate policies.

The Executive Board and Compliance Management together promote a compliance culture and actively strive to strengthen awareness for following rules and laws in the Group. Compliance Management establishes the main targets, develops the corresponding organization, and identifies, analyzes, and communicates significant compliance risks. It develops a compliance program that introduces principles and measures to limit risks and prevent violations. It also reports regularly (and as the circumstances may require) to the Executive Board and Audit Committee with regard to the compliance management system, compliance violations, and compliance-related measures. Compliance Management works together closely with Risk Management and Internal Audit. Within Aurubis' internal control system, the Chief Compliance Officer reviews potential compliance risks together with the Executive Board, the plant managers, and the heads of corporate and central functions.

The company's Chief Compliance Officer is the central point of contact for all compliance-relevant questions and reports directly to the Executive Board. At the individual Group sites, local compliance officers are available as a point of contact for employees.

Measures include prevention, monitoring, and sanctions. Preventive measures at Aurubis comprise internal policies, guidance, and particularly the training of employees. The Corporate Anti-Corruption Compliance Policy and the Code of Conduct for employees, both of which apply group-wide, are at the core of the anti-corruption efforts in our business activities.

The Aurubis Code of Conduct is given to every employee. They all confirm that they have received the Code of Conduct by signing the employment contract. Training on anti-corruption and antitrust law is carried out regularly throughout the Group.

Employees and business partners can make anonymous reports regarding legal violations via a whistleblower hotline. This hotline is operated by external, independent attorneys. If offenses are actually proven, the corresponding employees may – depending on the offense – be given a warning, be discharged from their duties, and/or have damages claims asserted against them.

In Aurubis' Business Partner Screening, our business partners are also reviewed with respect to compliance and corruption risks.

Key measures

- » *Employees for whom the topics of anti-corruption and antitrust law are relevant due to their responsibilities are trained on these topics about every three years, regardless of their level in the company hierarchy.*
In the past few years, this applied to around 1,300 employees for anti-corruption training (i.e., about 20% of the entire staff) and to around 400 employees for antitrust law training.

KPI:

We are not aware of any antitrust or corruption cases in the reporting period.

Limited Assurance Report of the Independent Auditor regarding the Combined Separate Non-Financial Report¹

- translation -

To the Supervisory Board of Aurubis AG, Hamburg.

We have performed an independent limited assurance engagement on the Combined Separate Non-Financial Report (hereinafter "Report") of Aurubis AG, Hamburg and the Group (hereinafter "Aurubis"), which has been qualified as part of the Combined Separate Non-Financial Report (hereinafter "Report") by reference, according to Sections 315b and 315c in conjunction with 289b to 289e HGB (German Commercial Code) for the business year from October 1, 2017 to September 30, 2018.

MANAGEMENT'S RESPONSIBILITY

The legal representatives of the entity are responsible for the preparation of the Report in accordance with Sections 315b and 315c in conjunction with 289b to 289e HGB.

This responsibility of the legal representatives includes the selection and application of appropriate methods to prepare the Report and the use of assumptions and estimates for individual disclosures which are reasonable under the given circumstances. Furthermore, this responsibility includes designing, implementing and maintaining systems and processes relevant for the preparation of the Report in a way that is free of – intended or unintended – material misstatements.

INDEPENDENCE AND QUALITY ASSURANCE ON THE PART OF THE AUDITING FIRM

We are independent from the entity in accordance with the requirements of independence and quality assurance set out in legal provisions and professional pronouncements and have fulfilled our additional professional obligations in accordance with these requirements.

Our audit firm applies the national statutory provisions and professional pronouncements for quality assurance, in particular the Professional Code for German Public Auditors and Chartered

¹Our engagement applied to the German version of the Report. This text is a translation of the Independent Assurance Report issued in German, whereas the German text is authoritative.

Accountants (in Germany) and the quality assurance standard of the German Institute of Public Auditors (Institut der Wirtschaftsprüfer, IDW) regarding quality assurance requirements in audit practice (IDW QS 1).

PRACTITIONER'S RESPONSIBILITY

Our responsibility is to express a conclusion on the Report based on our work performed within our limited assurance engagement.

We conducted our work in accordance with the International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" published by IAASB. This Standard requires that we plan and perform the assurance engagement to obtain limited assurance of whether any matters have come to our attention that cause us to believe that the Report of the entity has not been prepared, in all material respects, in accordance with Sections 315b and 315c in conjunction with 289b to 289e HGB. We do not, however, provide a separate conclusion for each disclosure. In a limited assurance engagement the evidence gathering procedures are more limited than in a reasonable assurance engagement and therefore less assurance is obtained than in a reasonable assurance engagement. The choice of audit procedures is subject to the auditor's own judgement.

Within the scope of our engagement, we performed amongst others the following procedures:

- » Inquiries of personnel on the corporate level, who are responsible for the materiality analysis, in order to gain an understanding of the processes for determining material sustainability topics and respective reporting boundaries of Aurubis
- » A risk analysis, including a media search, to identify relevant information on Aurubis sustainability performance in the reporting period
- » Evaluation of the design and implementation of the systems and processes for determining, processing and monitoring of disclosures relating to environmental, employee and social matters, respect for human rights, and combating corruption and bribery, including the consolidation of the data
- » Inquiries of personnel on the corporate level who are responsible for determining disclosures on concepts, due diligence processes, results and risks, for conducting internal controls and consolidation of the disclosures
- » Evaluation of selected internal and external documentation
- » Analytical evaluation of data and trends of quantitative disclosures, which are submitted by all sites for consolidation on the group level
- » Assessment of the overall presentation of the disclosures

CONCLUSION

Based on the procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the Report of Aurubis, for the business year from October 1, 2017 to September 30, 2018, is not prepared, in all material respects, in accordance with Sections 315b and 315c in conjunction with 289b to 289e HGB.

RESTRICTION OF USE/CLAUSE ON GENERAL ENGAGEMENT TERMS

This assurance report is issued for the purposes of the Supervisory Board of Aurubis, Hamburg, only. We assume no responsibility with regard to any third parties.

Our assignment for the Supervisory Board of Aurubis, Hamburg and professional liability is governed by the General Engagement Terms for Wirtschaftsprüfer (German Public Auditors) and Wirtschaftsprüfungsgesellschaften (German Public Audit Firms) (Allgemeine Auftragsbedingungen für Wirtschaftsprüfer und Wirtschaftsprüfungsgesellschaften) in the version dated January 1, 2017 www.kpmg.de/bescheinigungen/lib/aab_english.pdf. By reading and using the information contained in this assurance report, each recipient confirms having taken note of provisions of the General Engagement Terms (including the limitation of our liability for negligence to EUR 4 million as stipulated in No. 9) and accepts the validity of the General Engagement Terms with respect to us.

Hamburg, November 23, 2018

KPMG AG
Wirtschaftsprüfungsgesellschaft

Laue ppa. Mathias
Wirtschaftsprüfer
(German Public Auditor)