

GLOBAL COMPACT PROGRESS REPORT 2017 WACKER CHEMIE AG

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1 Statement of Continued Support (Message from the CEO)

Ladies and Gentlemen,

Fiscal 2016 was a good year for WACKER. Sales grew by 2 percent to €5.40 billion. This success would not have been possible without the high levels of commitment and outstanding expertise of our employees. Their strong performance was a key factor in our success. On behalf of the entire Executive Board, I sincerely thank all our employees for their hard work.

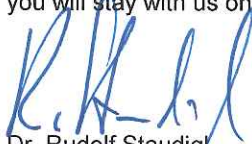
At WACKER, entrepreneurial success is not based solely on key financial indicators. It also depends on the answer to the question: How sustainably are we performing? Accordingly, sustainable management is one of our five strategic goals. In everything we do, we aim to bring economic, ecological and social factors into equilibrium.

At our Capital Market Day in Burghausen in October 2016, we presented WACKER's strategic priorities for the period up to 2020. The key pillars of our strategy are as follows:

- Our capital expenditures will remain below the level of depreciation over the period. We will invest in plants for producing intermediates and downstream products in order to leverage growth potential in specific regions.
- With these new capacities, we intend to grow more strongly than the chemical-industry average. Product innovations and a higher share of specialty products in our portfolio should help secure this growth.
- **Sustainability will become an ever more crucial factor in all our business processes – from the optimal use of raw materials and greater process efficiency through to the development of sustainable products that reduce CO2 emissions.**
- Our operating activities will focus on ensuring a high level of profitability. We are targeting an EBITDA margin of over 16 percent for our chemical divisions, while the target margin for our polysilicon business will be in excess of 30 percent.
- Lower capital expenditures, sustained growth, cost improvements and highly profitable operations will all ensure a continuously positive net cash flow.

A topic that concerns us deeply at the moment is the gradual abandonment of the principle of free trade. We have been witnessing an increase in protectionism, and not just since the Brexit vote in June 2016. Since the global financial crisis in 2008, more and more countries have been trying to protect their national economies. In this context, the fight against modern slavery and human-rights abuses is an important concern that deserves our attention. The fact that these topics are still socially relevant is shown by new regulations such as the UK's Modern Slavery Act and the National Action Plans on Business and Human Rights. This is why we, as a company, are going to identify and evaluate the risks of our business activities more systematically to take even greater account of these in our decision-making processes.

With its broad range of quality products, WACKER makes the everyday lives of people across the world's regions easier, simpler and more convenient. We aim to continue devoting all our strength to harnessing these opportunities – the potential is huge. On behalf of the entire Executive Board, I sincerely thank our customers and suppliers for their constructive collaboration and our shareholders for their trust. We look to the future with optimism and hope that you will stay with us on the path ahead.



Dr. Rudolf Staudigl
Vorsitzender des Vorstands der Wacker Chemie AG
April, 2017

2 Practical Actions

With the UN's Global Compact, we are anchoring social responsibility in our business. Volunteer, international initiatives provide the basis for sustainable corporate management at WACKER: for example Responsible Care® of the chemical industry, the Global Compact of the United Nations and the TfS sustainability initiative.

WACKER's Code of Conduct contains important principles, rules and behavioral guidelines that the company abides by. Every employee is obliged to observe these regulations. They serve as a guide for our employees alongside our existing contractual and company rules, regulations and compliance programs of individual Group companies.

The Code of Conduct defines the fundamental principles of our conduct. These principles are the basis for our work. They aim to avoid situations that could lead to our conduct's integrity being questioned. We see the Code of Conduct as an active regulation that's updated and improved in line with legal and social changes.

We expect all employees to observe not only the internal regulations described here, but also all standards of conduct and laws applicable in the countries where they work. We do not tolerate violations of the Code of Conduct's principles.

In our General Terms and Conditions for Purchase we share the rules of the Global Compact with our suppliers.

Regional Sustainability-Management Focus

In 2016, the regional focus of WACKER's sustainability management activities was on Europe, where we examined environmental, health and safety aspects of individual sites, including the Stetten and Halle sites in Germany, as well as our silicon-metal plant in Holla, Norway.

Analysis of Fundamental Sustainability Issues

Following up on the regular stakeholder surveys conducted as part of our sustainability reporting, we also interviewed our top management on fundamental sustainability issues for the first time in 2016. The result was that compliance, product safety and plant safety are the top three issues as seen by the company and stakeholders.

Sustainable Development Goals

On September 25, 2015, the "2030 Agenda for Sustainable Development" Was Approved at the UN Summit in New York. **WACKER is focusing on the fields of action on which we can have the greatest influence. Therefore WACKER is prioritizing the following SDGs:**



The Sustainable Development Goals (SDGs) describe

- The global **challenges** that WACKER can help overcome
- The significant **opportunities** for WACKER's operations
- The **guiding principle** for innovations at WACKER
- The **orientation** for approaching these challenges and opportunities in a targeted and efficient manner.

Implementation of corporate tools

To focus on essential topics of sustainability, we have implemented two corporate tools:

SOCIAL ASPECTS: WACKER SOCIOWHEEL



Health & Safety

- Workplace safety (product, transport and plant safety)
- Health management and emergency preparedness
- Safe use of products



Labor & Human Rights

- Respect for ILO core labor rights
- Employee recruitment and commitment
- Basic and advanced training
- Anti-discrimination and equal opportunity
- Working hours & work / life balance
- Open culture of appreciation
- Social benefits



Fair Business Practices

- No Child labor and forced labor
- Freedom of association (e.g. unions)
- Anti-corruption
- Prevention of fraud and money laundering
- Accuracy of (marketing) messages
- Free competition



Corporate Citizenship

- Voluntary commitment to serving the public good
- Environmental protection
- Open information policies and stakeholder dialogues
- Site policies and communications



ECOLOGICAL ASPECTS WACKER ECOWHEEL®



Material

- material use / resource efficiency
- cost savings by using
- renewable raw materials
- internal recycling
- durability of end application



Water

- needed water
- water in production
- availability
- water conservation



Energy

- use of energy
- greenhouse gas emissions
- climate change



Eco Toxicity

- effects for humans (toxicity, smog) & environment (eutrophication, acidification, ozone depletion)
- safety of production
- biodiversity & bio accumulation
- land use



2.1 Human Rights

WACKER is strongly committed to human rights and employees' rights. As a modern, globally active company, it is very important to us that every one of our sites complies with human rights and fair business practices. We condemn all forms of forced labor and slavery. By doing so, we are guided by the OECD guidelines for multinational enterprises, the ILO core labor standards and the UN Prince principles of Economics and human rights. In addition to the working conditions in the company itself, we also focus on the observance of human rights in the supply chain. We check this using assessments and audits in the framework of the "Together for Sustainability" initiative.

Human Rights in our Supply Chain

Our company with manufacturing facilities in Europe, America and Asia cooperates with global suppliers. The risks involved must be known, evaluated, and controlled. Any critical issues are: extraction of raw materials, working conditions, ethical standards, safety standards (especially when dealing with hazardous substances), as well as the use of local resources (such as water or energy consumption). To avoid such risks, we must ensure that we obtain raw materials, technical goods and services from responsible suppliers.

This is why WACKER joined "Together for Sustainability"(TfS), an initiative of the chemical industry, in January 2015. The Organization was founded in the year 2011 with the objective to develop a global program for the responsible procurement of goods and services and to improve the environmental and social standards for suppliers. The performance of the most important suppliers is reviewed and discussed with them in partnership. Social and environmental criteria have become an integral part of supplier evaluation since 2016.

WACKER as Supplier

In response to requests from two key customers WACKER underwent social audits and made the grade. An external auditing company confirmed that production at WACKER conforms to defined social, environmental and safety standards. German sites in Burghausen and Nünchritz and the site in Adrian, USA were inspected in February 2016, while sites in Zhangjiagang (China), Amtala (India) and Jandira (Brazil) were audited the previous year.

The auditors interviewed 62 employees in Burghausen and 52 in Nünchritz over a three-day period. Supervisors were not present during these talks. Additionally, with the consent of the employees, the auditors checked contracts and asked staff members about compliance regarding working hours, collective-bargaining agreements, company agreements and protection standards for pregnant women or minors. They gathered information at the facilities relating to the safety training provided and what type of work requires approval permits. In total, 150 people were actively involved in the audits at the two German sites alone.

The auditors also examined supplier management, compliance rules, environmental standards and energy supplies at the plants. They were impressed with the Group's infrastructure, especially the company's own hydroelectric power plant in Burghausen, which gives WACKER a fair degree of independence from other energy supplies and produces power without emitting CO₂.

Improvement suggestions were put forward by the inspectors for the Group's international sites: for example, setting up a whistle-blower hotline at the Adrian site where employees can report potential violations anonymously.

Project for Young Refugees

In February 2017, the company announced its sponsorship pledge for "We Together – the German Business Integration Initiative." By joining the initiative, the company is seeking to make a concrete, sustainable contribution toward the integration of refugees in Germany.

As part of an orientation week, refugees will be given the opportunity to get to know the WACKER site at Burghausen. They will be given insight into various technical vocations and the chance to demonstrate their practical and technical expertise by performing simple tasks. Instructors provide refugees with feedback on key skills needed for successful training in metalwork, electrical work and chemistry. WACKER works closely with Altötting technical college, where the refugees receive comprehensive instruction in specially organized development and integration classes.

In addition to this, WACKER accommodates unaccompanied refugee minors in its youth hostel in Burghausen. The refugees are learning German, and are also taking an integration course at the Altötting technical college with the goal of obtaining the educational qualifications required for vocational training. Six of the twelve refugees housed in the youth hostel have already been able to begin training in local craftsmen businesses. WACKER also has two refugees in its business administration training program.

WACKER HILFSFONDS: Helping Flood Victims

Following the tsunami disaster in 2004, WACKER founded its WACKER HILFSFONDS relief fund. It lends help to victims of natural disasters. This charitable fund provides long-term assistance for reconstruction projects in devastated regions. WACKER has always matched its employees' donations to the charity.

Parts of the Lower Bavaria region in Germany were hit by a once-in-a-millennium flood in June 2016. Many individuals and social institutions were affected, including WACKER employees. WACKER HILFSFONDS, the Wacker Chemie AG foundation for disaster aid, is assisting those affected in the region. In a donation campaign organized by the relief fund, WACKER HILFSFONDS raised approximately €156,000. With a matching contribution from the company, a total of some €312,000 was provided to assist the rebuilding effort. WACKER also made a separate donation of €100,000 in emergency aid for flood victims.

Supporting Science Education

Some 12,058 young scientists from across Germany have applied to take part in the "Young Scientists" competition and its junior counterpart "Schüler experimentieren." Most of the applications for Europe's biggest young scientists' competition came once again from Bavaria. Now that the regional competitions have finished, the young scientists' best ideas are competing at state level. As sponsor, WACKER is organizing the Bavarian competition for the tenth time this year.

2.2 Labor Standards

As a global company, WACKER operates in international markets and multicultural environments. Holding each employee's skills and dedication in high regard, we view human diversity as an asset. We oppose discriminatory or derogative treatment on account of gender, race, ethnicity, religion, ideology, disability, sexual orientation or age. These principles are valid across the WACKER Group and, as part of our corporate culture, are embodied in our Code of Teamwork & Leadership, drafted in 2012. Employees may report any discrimination to their supervisors, as well as to a compliance officer, the employee council or the designated HR contact person. The complaint will be investigated and the reporting employee will be informed of the results. We do not keep a log of discrimination cases.

Special arrangements are in place to help and promote WACKER employees who are disabled or suffer from long-term occupational disabilities. The company's integration management program provides for close cooperation between supervisors, employees, HR, disabled-employee representatives and Health Services to permit disabled employees to remain in their workplace or to change to a suitable job.

It goes without saying that we offer equality of opportunity to all employees, regardless of their gender. This approach also applies to compensation. The amount earned reflects in particular each job's specific demands and responsibilities. The average annual salary of female employees is marginally lower than that of male employees. The reason lies in the statistical analysis, where the figures had not been adjusted for parameters such as seniority, age and performance content of the salary.

Personnel expenses rose 2.2 percent year over year to €1,379.4 million, and included outlays for social benefits and the company pension plan amounting to €272.5 million (2015: €279.9 million). The increase in personnel expenses was due to the higher number of employees and the increase in the standard pay scale.

The IG BCE labor union and chemical-industry employers agreed on a new 24-month collective-bargaining agreement in June 2016. The first stage of the agreement saw the standard pay scale increase by 3 percent on September 1, 2016. Effective October 1, 2017, it will rise by a further 2.3 percent.

A Popular Employer Among Managers

According to its own managerial employees, WACKER ranks among the top three most popular employers in the German chemical and pharmaceutical industries. In the member satisfaction survey conducted every year by Germany's Association of Chemical-Industry Executives (VAA), WACKER placed third in the reporting period. The average score for all of the 24 participating companies was unchanged from the year before at 3.1 (with 1 being the highest and 5 the lowest). With a score of 2.63, WACKER performed better than average and, at the same time, made the largest jump of any of the participating companies.

Good social benefits, competitive compensation and motivating tasks make WACKER an attractive employer. This explains our high level of employee loyalty. The average length of service in Germany (permanent staff) was 18.8 years (2015: 18.4 years).

Diversity and Inclusion in the Workforce

Since joining Germany's nationwide Diversity Charter initiative in 2015, WACKER has focused every year on specific topics aimed at making employees aware of the opportunities and challenges associated with a diverse workforce. The focus in 2016 was on the company's generational mix. The fact is that, in years to come, different generations will be working together some ten years longer than today, making the workforce more heterogeneous in this respect. This is because older employees are staying in the company longer owing to the increase in the retirement age just as younger staff enters the company sooner because of the Europe-wide harmonization of study programs in higher education and, in Germany, the reduced number of school years.

In addition to this issue, diversity management at WACKER is placing greater emphasis on gender and cultural background. People from 69 different nations work for WACKER. At the end of 2016, 43 of the group wide total of 196 executive personnel were of non-German nationality – which corresponds to 22 percent of the total. Overall, 17 nationalities were represented at the executive level.

WACKER implements Quota for Women

The German statute on equal opportunity for women and men in management that became law on May 1, 2015, has been implemented at WACKER as follows:

Executive Board: While Wacker Chemie AG attaches considerable importance to diversity as regards appointments to the Executive Board, expertise and qualifications remain the principal criteria for such appointments. There are no regular new appointments planned for the next available date (June 30, 2017). Under these circumstances, the target for the proportion of women in the Executive Board for the period up to June 30, 2017, is zero.

Management levels below the Executive Board: WACKER is focusing its attention on the two levels of management below the Executive Board as depicted in the Wacker Chemie AG organizational chart. With regard to the second reporting level, we have also decided to include only managerial employees from the highest above-standard pay scale or those who are OFK executive personnel with responsibility for managing employees.

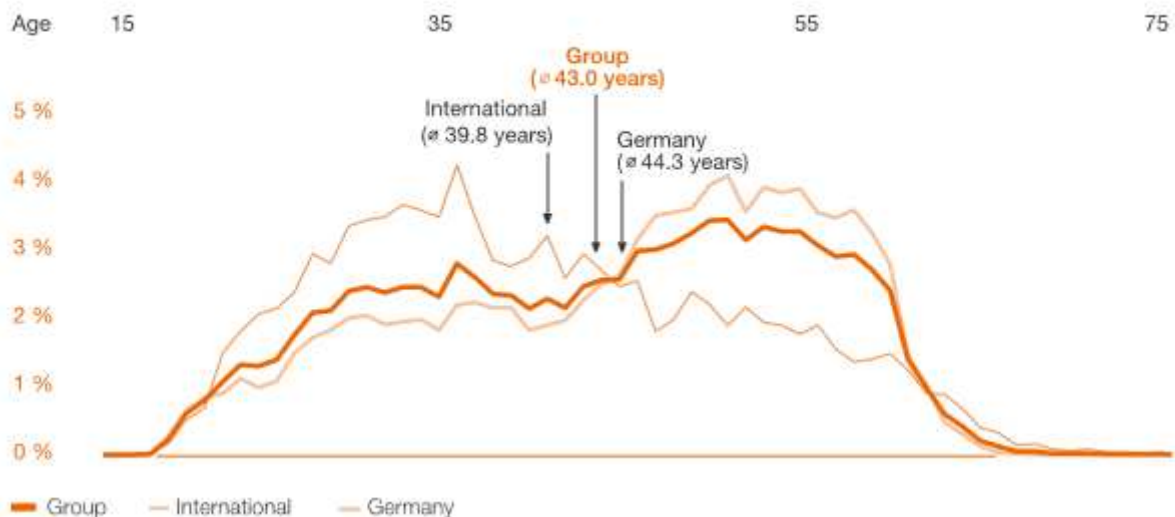
We have also designated the period up to June 30, 2017, as the reporting period for the two management levels below the Executive Board. Because our numbers are based on the status quo as of June 30, 2015, we will have a two-year period to observe developments.

Proportion of women: We aim to increase the proportion of women in the first level of management from 8 percent to 10 percent. For the second level of management, we have set a goal of raising the proportion of women from 14.5 percent to 17.5 percent.

Demographic Analysis

WACKER has been addressing demographic change for many years. The average age of the Group's workforce at the reporting date was 43.0. Employees at non-German sites are younger than in Germany. The age structure abroad varies greatly from region to region. Staff at Asian sites are comparatively young (average age: 35.6), while staff at US locations have an average age of 44.7. Regional variations in age structure are not exclusive to WACKER; they reflect the age structures of the populations in the respective continent or country.

Demographic Analysis of German and International Sites in 2016



Health Management, Example India

Wacker Metroark Chemicals Pvt. Ltd. (WMC), a joint venture between WACKER and Indian silicone manufacturer Metroark, has been holding Health & Eye Camps once or twice per year since 2008. At this event at the end of last year, some 600 men and women from neighboring communities – most of whom were impoverished – had their eyes tested and underwent a health check free of charge. After conducting the tests, the eye specialists gave 410 participants prescriptions for glasses and 71 people referrals to hospital for cataract surgery. Cataracts occur particularly frequently in developing countries due to malnutrition or cooking on an open hearth

In addition to eye tests, the organizers offered a general health check, which included a blood test and an ECG. Cataract surgery – one of the most common and simplest procedures performed by eye specialists – was then carried out at the prestigious Susrut Eye Foundation hospital on two consecutive days. The costs amounting to 6,500 rupees (€90) per procedure were borne by WMC.

The Health & Eye Camps are aimed primarily at the local poor who cannot afford medical care. However, even those who come from further afield are treated.

The Susrut Eye Foundation introduced the Health & Eye Camps initiated by WMC to other large, respected companies and, as a result, many wish to follow this example.

Basic and Advanced Training at High Levels


In its personnel development activities, WACKER also relies on vocational training. In 2016, 174 young people began their training at WACKER or at the Burghausen Vocational Training Center (BBiW). In total, the company employed 596 trainees, roughly the same as in the prior year (597). At 4.7 percent, the percentage of trainees (ratio of trainees to Group employees in Germany) was on a par with the prior year (4.7 percent). In 2016, WACKER offered jobs to the majority of suitable trainees – 154 graduates – hiring 41 of them on temporary contracts and 113 on permanent contracts. The BBiW also provides training for 22 partner companies.

Overall, WACKER invested €7.9 million in personnel-development measures and advanced training in 2016 (2015: €7.7 million).

Idea Management: Streamlining the Process

The ideas submitted by WACKER's employees help it to do things better and stay competitive. In 2016, the number of improvement suggestions submitted was up 6 percent year over year. The participation rate (number of submitters per 100 employees) and the total benefit rose as well. We revised the idea management system in the reporting period, and streamlined the processes for handling ideas.

Idea Management

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	2016	2015	2014	2013	2012
Number of improvement suggestions	7,885	7,429	7,672	9,159	8,982
Participation rate (%)	32	29	30	32	34
Total benefit (€ million)	7.0	6.8	8.3	7.7	4.9

2.3 Environment & Climate

WACKER attaches particular importance to integrated environmental protection, which commences with product development and plant planning. Our environmental protection measures often surpass statutory requirements – in the spirit of the central idea behind the Responsible Care® initiative. WACKER constantly works on improving its production processes, with the aim of conserving resources. One of our main tasks is to close material loops and recycle byproducts from other areas back into production, enabling us to reduce or prevent emissions and waste.

Our commitment to environmental protection is visible in the awards we have won. For example, WACKER Greater China was once again presented with Shanghai's Magnolia Silver Award in recognition of its contribution to the city's sustainable development. The Safety Committee of the Zhangjiagang Free Trade Zone recognized the safety and environmental-protection measures of the WACKER production site in this zone. The City of Portland presented its Gold Sustainability at Work Certification to Siltronic's US production site in honor of its sustainability activities. It also presented its Gold Compliance Award for the safe, sustainable operation of the Portland wafer production facility's wastewater treatment plant.

In 2016, WACKER invested €5.5 million in environmental protection (2015: €5.7 million). In the same period, environmental operating costs amounted to €81.0 million (2015: €83.8 million).

Product Stewardship

WACKER takes environmental, health and safety aspects into consideration at every stage of the product lifecycle. In research and development projects, we examine the sustainability aspects of our new products and processes, starting with the raw materials used. We try to minimize raw-material consumption while selecting materials that offer maximum ecological benefit. Our products are generally supplied to business customers for further processing – not directly to end customers. Our lifecycle assessments (LCA s) look at the environmental impact caused by a specific product family throughout its lifecycle – a “cradle-to-gate” assessment extending from manufacturing to the factory gate. They allow us to gauge the sustainability of our products and production processes, and to improve them accordingly. Our evaluations factor in the material, water and energy consumption of a product, as well as its ecotoxicity, over the entire lifecycle. With the help of the WACKER EcoWheel®, we identify key sustainability topics and, together with our customers, set priorities for research projects.

Product Lifecycles



Reparation of Alz canal

In 2016, we cleaned up and repaired the roughly 17-kilometer Alz canal at the Burghausen site. Its water is used to generate power as well as supply cooling and process water for the Burghausen site. To ensure that the waterway ecology would not be compromised during the clean-up phase, we used a monitoring program to control the alternative intake of cooling and process water and the altered disposal of cooling / process water and wastewater. We used the Salzach river as an alternative source of cooling and process water. As the temperature of this water is much lower than that of the Alz canal, much less water was required.

Tracking down noise

Noise pollution at the Burghausen site has dropped significantly over the past 40 years, thanks, in part, to the emission-control experts from the Environment department. The noise produced by the site is one twentieth of what it was when measurements began in 1976. And that's been accomplished even though the number of plants on site has more than doubled over the same period. The basic principle underlying emissions control at Burghausen is that for every new source of noise, an older, louder source has to be eliminated or improved.

There are currently 1,787 identified sources of noise on site. Each of these is categorized by noise level and entered into a comprehensive sound-propagation formula. Relatively small sources of noise are reviewed every ten years, while more significant sources are revisited every three years. Seidel follows a timetable for his acoustic audits covering roughly 170 sources per year. In addition to in-house monitoring, an independent body conducts emissions testing every three years.

In the case of new construction projects, the noise-control experts are involved as early as the planning stage, "after all, retrofitting existing equipment sends the costs through the roof," explains Seidel. Insulation, enclosures, mufflers and noise barriers are all possible ways of reducing noise from individual machines.

An overall understanding of how sound propagates plays a critical role in noise abatement as well, however. If, for instance, loud machines are located in tall buildings with large window facades, the glass will begin to vibrate and the noise will propagate tremendously.

After the construction of a new large-scale spray dryer for dispersible polymer powder, the optimization of the air infeed brought the sound down to the required level. This finding was applicable to other dryers.

2.4 Anti-Corruption

At WACKER, managerial and monitoring duties include ensuring that the company complies with legal requirements and that employees observe internal company regulations. WACKER's compliance management system is regularly reviewed and adapted.

These tasks are the responsibility of the compliance management department. The company has appointed and trained compliance officers in Germany, Norway, the USA, China, Japan, India, South Korea, Brazil, Mexico, Singapore, Russia, the United Arab Emirates and Taiwan, who hold regular training courses to inform employees of key legal provisions and internal regulations. They also serve as contacts whenever employees have questions or need advice about compliance. In 2015, one focus of the compliance management department remained the further improvement of communication with the company's international sites within the compliance organization and the training of the local employees at those sites.

3 Results

Group Certificate

Our Group certification program ensures that customer-driven specifications and our corporate standards are implemented at all WACKER sites. Almost all WACKER production sites are included in the ISO 9001 (quality) and ISO 14001 (environment) Group certificates. Exceptions are Wacker Química do Brasil, the Kolkata plant belonging to Wacker Metroark Chemicals Pvt. Ltd., India, and the Tsukuba site of Wacker Asahi Kasei □ Silicone Co., Ltd., Tokyo, Japan. All these sites have corresponding individual certificates. After commissioning, the new plant in Charleston, USA, was also incorporated into the ISO 9001 Group certificate.

As of 2012, all German sites belonging to Wacker Chemie AG, Siltronic AG and Alzwerke GmbH have been certified to ISO 50001 (energy management systems). Wacker Biotech GmbH and DRAWIN Vertriebs-GmbH were successfully certified to this standard in the reporting period. The silicone-producing sites in Burghausen and Nünchritz (both Germany), Jandira (Brazil), Zhangjiagang (China) and Amtala (India) are certified to the ISO 22716 standard for the cosmetics industry.

Greenhouse Gas Emissions

Measuring the Group's corporate CO₂ footprint is an important tool for improving climate protection. That is why we have been measuring our Scope 3 emissions since 2012 – in addition to our indirect greenhouse gas emissions from procured energy (in accordance with Greenhouse Gas Protocol Scope 2), which we have been tracking since 2011. Scope 3 emissions comprise all those generated along the supply chain, e. g. by suppliers or through waste disposal and the transport of products. In 2016, we once again provided this emissions data to the Carbon Disclosure Project (CDP), which WACKER joined in 2007. Founded in London in 2000, CDP is a not-for-profit organization working to achieve greater transparency in greenhouse gas emissions. Wacker Chemie AG's performance profile was rated B (on a scale from A to D) in CDP's annual sustainability ratings.

COD effluent burdens rose as a result of the new polysilicon production plant in Charleston (TN, USA).

The increase in AOX (adsorbable organic halogen compounds) was caused by discharge from a company based at the Burghausen site entering WACKER's captive sewer system; the discharged substance did not adversely impact the environment.

Commissioning of the Charleston site led to a 4.3-percent rise in direct emissions of carbon dioxide (Scope 1) group wide.

There were two reasons for increased nitrogen oxide emissions (NO_x): first, the new Charleston site; second, the legally required recording of emissions data at the Holla site in Norway involved a new measurement method.

Emissions of non-methane volatile organic compounds (NMVOCs) at Burghausen fell; group wide, they rose slightly as a result of higher production volumes at the sites in Nanjing (China) and Ulsan (South Korea).

One of our environmental targets is to halve specific dust emissions per metric ton of product group wide between 2012 and 2022. This mainly affects silicon-metal production at the Holla site in Norway, where modifications were made to filtration systems during the reporting year in order to reduce dust. Owing to this modification work, dust emissions rose temporarily during the official, four-week period of non-standard operations. If specific emissions are calculated solely for normal operations in 2016, it is apparent that the measures already taken have brought about an improvement of some 40 percent relative to the base year of 2012.

Our indirect CO₂ emissions from procured energy (as per Greenhouse Gas Protocol Scope 2) rose to 1,855 kilotons (kt) in the reporting period (2015: 1,544 kt). The reasons for the increase were the commissioning of the Charleston site, and the temporary shutdown of the Burghausen power plant for maintenance work. We used energy-efficiency measures to reduce weighted specific energy consumption and related specific CO₂ emissions – while maintaining a comparable product portfolio.

Environmental Indicators from 2012 to 2016

[Download XLS](#)

	2016	2015	2014	2013	2012
Air					
CO ₂ emissions ¹					
Direct (kt)	1,287	1,234	1,251	1,253	1,311
Indirect (kt)	1,856	1,544	1,420	1,241	1,133
NO _x nitrogen oxides (t)	2,035	1,910	1,990	2,010	2,225
Non-methane volatile organic compounds (NMVOCs) (t)	920	910	870	830	800
Total dust ² (t)	517	389	494	658	591
Water					
Water consumption (thousand m ³)	231,858	237,060	241,973	220,908	242,072
Chemical oxygen demand (COD) (t)	1,310	1,150	1,230	1,320	1,460
Halogenated organic hydrocarbons (AOX) (t)	3	2	2	2	3
Waste					
Disposed of (t)	43,590	46,490	51,570	39,210	41,340
Recycled (t)	123,550	121,420	121,540	124,040	114,330
Hazardous (t)	81,110	75,520	78,330	78,910	70,910
Non-hazardous (t)	86,030	92,390	94,780	84,340	84,760

¹ CO₂ emissions are measured as per the Greenhouse Gas Protocol (GHG Protocol: "A Corporate Accounting and Reporting Standard"), published by the World Resources Institute and World Business Council for Sustainable Development. Scope 1: direct CO₂ emissions. Scope 2: indirect emissions from the consumption of purchased energy (converted into CO₂ equivalents for purchased electricity). For the purposes of sustainability reporting, the Group's direct CO₂ emissions also included intra-plant traffic emissions at our sites, emissions generated during biological wastewater treatment, and the emissions of the emergency power units used during the shutdown of the Alz canal at the Burghausen site.

² One of our environmental targets concerns total dust emissions. We are reporting on these emissions in the 2016 Annual Report for the first time and retroactively to 2012, the initial year of our dust-related environmental objective.

Sustainability report: Best in the industry

In 2016, the Institute for Ecological Economy Research (IÖW) and the business initiative "future e.V." published their ranking of corporate sustainability reports. Conducted on behalf of the German Federal Ministry of Labor and Social Affairs, the initiative has now evaluated the sustainability reports of the 150 largest German companies for the ninth time. The 2013 / 2014 WACKER Sustainability Report was ranked 11th, which represents an improvement relative to our last ranking (2011: 14th place). It took the top spot in the chemical / pharmaceutical sector.


Workplace and Plant Safety

Operating plants and processes in a manner that poses no risk to people or the environment is an important objective at WACKER. To this end, we have installed a group wide safety management system that addresses both workplace and plant safety. Systematic workplace safety includes regular evaluation of hazards and work-area monitoring. The first step in ensuring plant safety is to systematically identify risks and assess them. This includes analyzing how well we control the energy present in a process (e. g. pressure, heat) and determining the effect that a single error might have on a chain of events that could lead to the escape of a substance or to an accident. On completion of this comprehensive analysis, we specify safety measures to prevent undesirable incidents.

WACKER attaches particular importance to providing its safety experts with ongoing training. We hold regular training sessions on topics such as plant safety.

Our goal for occupational safety is to reduce our group wide accident rate (the number of workplace accidents per million hours worked) to at least 1.7 by 2020. Group wide, we registered 3.0 workplace accidents with missed workdays per 1 million hours worked in the reporting period. In terms of reportable accidents (accidents with more than three days of absence), WACKER's numbers are far better than the German chemical industry average. The reportable accident rate in 2016 was 1.6. per 1 million hours worked, whereas in 2015, Germany's BG RCI (the statutory employer liability insurance carrier of the basic materials and chemical industries) registered 9.4 reportable accidents per 1 million hours worked in chemical companies.

Workplace Accidents Involving Permanent Staff and Temporary Workers – Group

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Number	2016	2015	2014	2013	2012
Accidents ¹ per 1 million hours worked	3.0	2.6	2.8	3.8	4.7
Reportable accidents ² per 1 million hours worked	1.6	1.0	1.2	1.4	2.1

¹ Accidents leading to at least one day off work

² Accidents leading to over three days off work

Water Consumption Tested Using Global Water Tool®

We use the Global Water Tool® (GWT) developed by the World Business Council for Sustainable Development (WBCSD) to analyze the annual relative water stress index of the countries in which our main global production sites are located. This assessment has been conducted since 2012, based on analyses using the water stress index developed by the Water Systems Analysis Group of the University of New Hampshire, USA. This index provides information on the relationship between water consumption and the availability of renewable fresh water. The outcome of the analysis is that our most important production sites are located in regions with a low relative water stress index. These regions account for more than 97 percent of our annual water use and over 90 percent of our production volume. Production sites in countries for which no GWT-based water stress index information is available account for less than 0.5 percent of our water consumption.

As part of the Bavarian Environmental Pact, we joined with seven other companies from ChemDelta Bavaria to establish Naturnahe Alz (Natural Alz), an association through which we support the state of Bavaria in renaturalizing the Alz river and enhancing its ecosystem long-term.

Energy management

The chemical industry is one of the most energy-intensive sectors. In Germany alone, it uses around 20 percent of all the electricity consumed by industry. Wacker Chemie AG consumes 4,103 GWh of electricity in Germany, representing approximately 0.8 percent of the country's electricity consumption. WACKER is continually improving the energy efficiency of its processes. This enables us to remain globally competitive while at the same time contributing to climate protection.

Many chemical reactions generate heat that can be put to use in other production processes. We have been using integrated heat-recovery systems in Burghausen and Nünchritz for years and are continually improving them. In this way, we can reduce the amount of primary energy (natural gas) consumed by our power plants.

To enhance energy efficiency and reduce specific energy consumption (amount of energy per unit of net production output), the Executive Board has defined energy targets for WACKER Germany. Our original goal was to reduce weighted specific energy consumption by one-third between 2007 and 2022, but we had already achieved that by 2014. We have now set a goal of reducing specific energy consumption to half of the 2007 level by the year 2022.

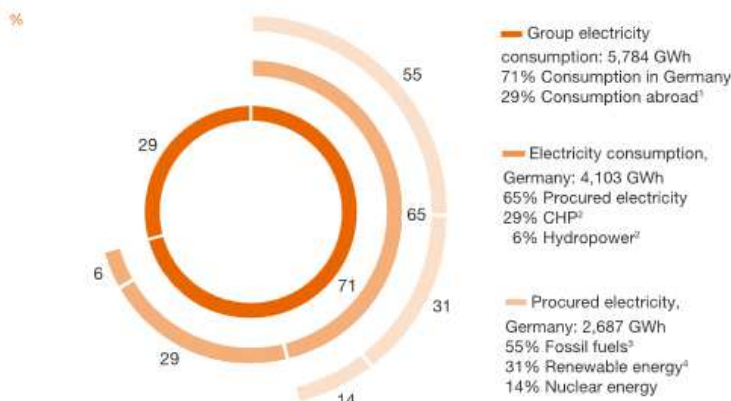
Generating Energy Efficiently

One way in which Burghausen generates electricity is by using hydroelectric power. Our Norwegian site, Holla, also generates its electricity mainly from water power.

Our primary source of energy, though, is climate-friendly natural gas. At Burghausen, our largest site, we produce steam and electricity using a cogeneration system. The highly efficient combined heat and power (CHP) plant operates at more than 80-percent fuel efficiency, which is significantly higher than that of conventional power plants generating electricity and heat separately.

WACKER's German production sites accounted for 71 percent (2015: 78 percent) of its total electricity needs. We have taken energy-efficiency measures to reduce specific energy consumption even further in 2016. The Group's power plants – the hydroelectric and CHP plants in Burghausen and the cogeneration plant in Nünchritz – produced around 1,416 GWh of electricity in 2016 (2015: 1,451 GWh). This means that WACKER uses environmentally friendly processes to cover roughly 25 percent of its total electricity needs itself. Group wide, carbon dioxide emissions from captive power plants subject to emissions trading rules and from silicon-metal production in Holla (Norway) totaled about 1.0 million metric tons in the reporting period (2015: 1.1 million metric tons).

Electricity Supply



¹Outside Germany, we purchase electricity from third parties based on the local standard energy mix.

²Burghausen


³Coal, lignite, oil, gas; modified calculation method: since 2014, data has been in line with Germany's energy mix; source: BDEW (German Association of Energy and Water Industries); status as of Nov. 2015, for the year 2014

⁴Hydro, wind, solar power; modified calculation method: since 2014, data in line with Germany's energy mix; source: BDEW (German Association of Energy and Water Industries)

WACKER is subject to the regulations of the EU emissions trading system because of its CHP plants at the Burghausen and Nünchritz sites. We have covered shortfalls since 2014 by buying emission allowances for facilities subject to emissions trading.

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Energy Consumption

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GWh	2016	2015	2014	2013	2012
Electricity consumption	5,784	5,147	4,926	4,521	4,519
Heat consumption	3,947	3,520	3,571	3,709	3,734
Primary energy use (total)	6,464	6,062	6,081	6,176	7,030
Of which					
Natural gas	5,420	5,029	4,975	5,051	5,927
Solid fuels ¹	769	768	839	872	862
Heat supplied by third parties ²	258	245	242	236	223
Fuel oil	17	20	20	17	18

¹ Coal, charcoal and wood; used as reducing agents at the silicon-metal plant in Holla, Norway

² Steam and district heating

Sustainable Supply Chain Management

Joined the initiative in 2015, we have evaluated approximately 750 suppliers in their sustainability performance until the end of 2016. This has been done in large parts by assessments, conducted by the independent company EcoVadis, or through on-site audits conducted by independent certification bodies. The assessments / audits were either triggered by WACKER or by other members of TfS. In 2016, focus was on Europe, the focus on regions such as China and the United States will be growing in 2017. Our goal is to have assessed 80% of the sourcing volume according to sustainability criteria by 2020.

The suppliers are classified in 4 categories:

- Very good to excellent rating: we work with the suppliers together without further review.
- Average to good rating: the buyer remains in the conversation with the supplier. Improvement measures are discussed and implemented with less time pressure.
- Below-average rating: the buyer goes through the report together with the suppliers. Aim is to develop a rapid improvement program.
- Bad rating: the supplier is informed that he must immediately initiate improvement actions. Otherwise we reserve the right to terminate the collaboration.

The ratings of assessed suppliers range in category 2 and 3 about equally. This has the consequence that improvements with the supplier have to be reinforced in 2017.