

Facets of Involvement.

The Linde Corporate Responsibility Report 2007.

LeadIng.

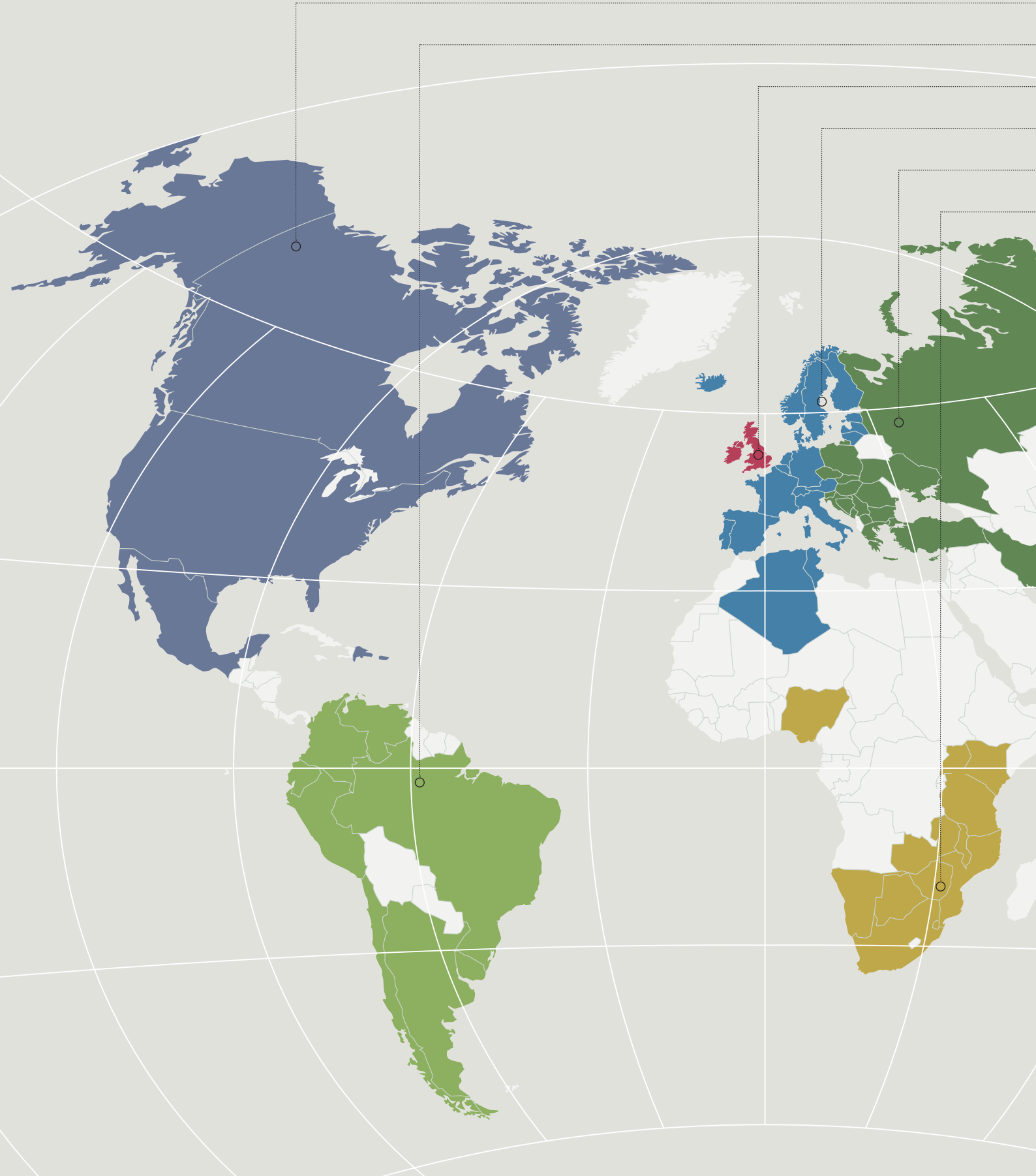


THE LINDE GROUP

2007

# The Linde World

The company is divided into three divisions:  
Gases, Engineering and Gist (logistics).

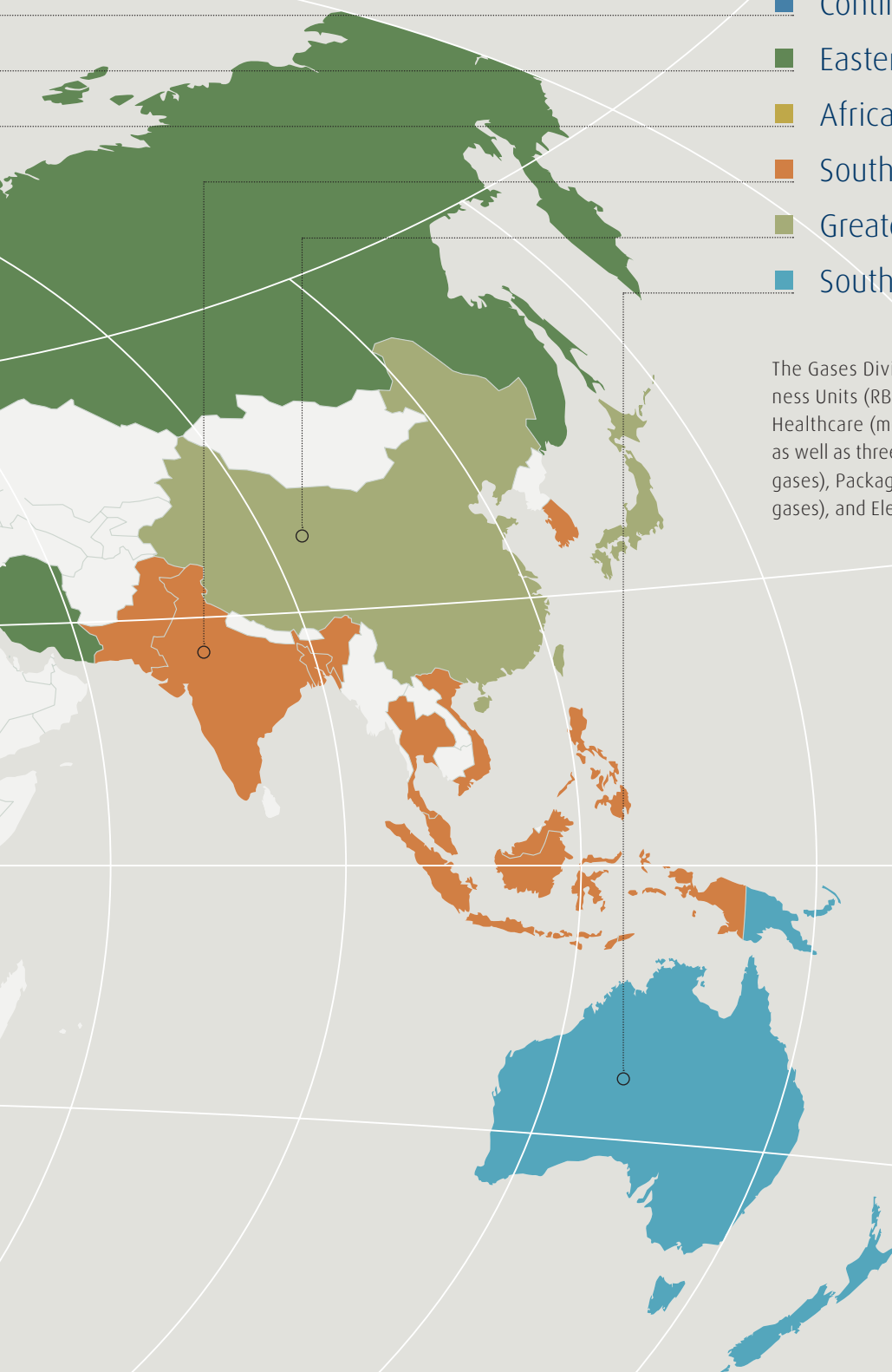




## The Regional Business Units of the Gases Division

- North America
- South America
- UK & Ireland
- Continental & Northern Europe
- Eastern Europe & Middle East
- Africa
- South & East Asia
- Greater China
- South Pacific

The Gases Division is split into nine Regional Business Units (RBUs), two Global Business Units (GBUs), Healthcare (medical gases) and Tonnage (on-site), as well as three Business Areas (BAs) – Bulk (liquefied gases), Packaged Gases and Products (PGP, cylinder gases), and Electronics (specialty gases).





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# Facets of Involvement.

The Linde Corporate Responsibility Report 2007

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Today, Linde is active in over 70 countries across all continents. Our position as a leading industrial gases and engineering company has many different facets. Equally multifaceted is the nature of our relationships with our stakeholders – our employees, customers, business partners and shareholders – and with local communities.

At all times and at all places, we stand out through the quality and reliability of our products and technologies, innovative drive and sense of responsibility towards other people and the environment. This commitment creates a versatile framework to express the many facets of our involvement in Corporate Responsibility.

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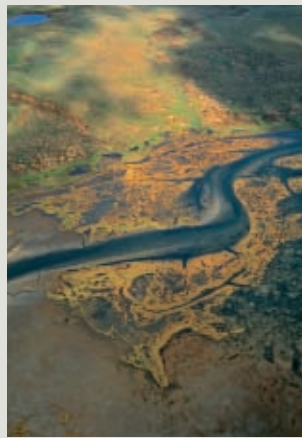
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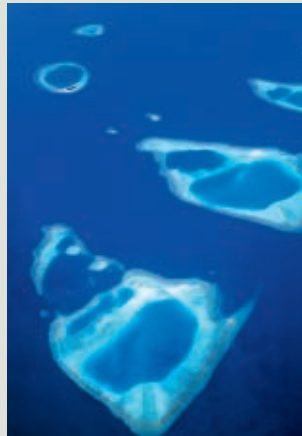
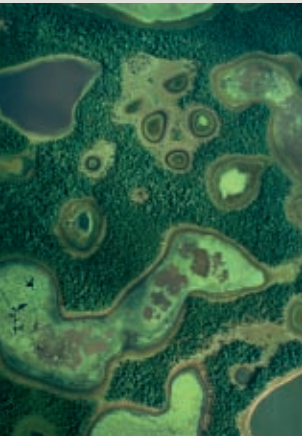
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# Corporate profile

## The Linde Group

The Linde Group is a world-leading industrial gases and engineering group which operates in more than 70 countries and has over 49,000<sup>1</sup> employees worldwide. Following the acquisition of The BOC Group plc, the company realised annual sales of around € 12 billion for its activities in the industrial gas, medical gas and engineering sectors. The Linde Group strategy is geared towards profitable growth, driven in particular by the expansion of our international business with next-generation products and services.

## Structure

The company is divided into three divisions: Gases, Engineering and Gist (logistics services). The Gases Division is further split into nine Regional Business Units (RBUs), two Global Business Units (GBUs), Healthcare (medical gases) and Tonnage (on-site), as well as three Business Areas (BAs) – Bulk (liquefied gases), Packaged Gases and Products (PGP, cylinder gases) and Electronics (specialty gases).

## Gases Division

The Linde Group is a world leader in the international industrial gas market. Customers across the widest variety of industries rely on our wide range of compressed and liquefied gases as well as our chemicals. Linde gases are used, for example, in steel production, chemical processing, environmental protection and welding, as well as in food processing, glass production and electronics. We are also investing in the expansion of our fast-growing healthcare segment, the medical gas business, and we are a leading global player in the development of environmentally friendly hydrogen technologies.

## Engineering Division

Our Engineering Division is successful throughout the world, with its focus on promising market segments such as olefin plants, natural gas plants and air separation plants, as well as hydrogen and synthetic gas plants. In contrast to virtually all our competitors, we can rely exclusively on our own extensive process engineering know-how in the planning, project development and construction of turnkey industrial plants. Linde plants are used in the petrochemical, chemical and pharmaceutical industries, for example. Applications include refining crude oils, manufacturing fertilisers, recovering air gases, producing hydrogen and synthesis gases, and treating natural gas.

## Gist Division

The Gist Division is a leading provider of logistics and supply chain solutions. It is positioned as the partner of choice for customers from numerous branches of trade and industry, including retail, food, electronics and gases.

This division has roughly 5,500 employees distributed across 35 locations, serving well-known customers such as Woolworths, Ocado, Marks & Spencer, British Airways, Carlsberg UK, Budgens and Intergreen.

<sup>1</sup> Number does not include discontinued business operations.



# Linde Financial Highlights

in € million	2006 <sup>1</sup>	2005 <sup>2</sup>
Sales	12,439	9,511
In Germany %	17.2	20.1
Outside Germany %	82.8	79.9
Operating profit <sup>3</sup>	2,216	1,705
EBIT	1,371	953
Earnings before taxes on income (EBT)	2,527	808
Earnings after taxes on income – attributable to Linde AG shareholders	1,838	514
Earnings per share <sup>4</sup> €	13.30	4.30
Closing price <sup>5</sup> €	78.26	62.81
Year high <sup>5</sup> €	79.56	63.36
Year low €	56.32	45.55
Dividends	241	168
Market capitalisation	12,579	7,529
Capital expenditure (including financial assets)	1,051	919
Cash flow from operating activities	1,227	1,501
Equity ratio %	29.4	35.4
Return on capital employed (ROCE) %	11.4	13.7
Cost of materials	5,834	4,434
Personnel costs	2,809	2,133
Group employees	55,445	42,229
In Germany %	24.4	34.6
Outside Germany %	75.6	65.4

## Key figures by division

in € million	2006 <sup>1</sup>	2005 <sup>2</sup>
<b>Gases Division</b>		
Sales	6,195	4,448
Operating profit	1,540	1,104
Number of employees	39,142	17,783
<b>Engineering Division</b>		
Sales	1,863	1,623
Operating profit	153	117
Number of employees	5,166	4,408

<sup>1</sup> BOC data included as of initial consolidation on 5 September 2006 to year-end. The figures include discontinued business operations.

<sup>2</sup> Prior-year values for 2005 adjusted.

<sup>3</sup> Operating profit: EBITDA before non-recurring items, including our share of the income from associates and joint ventures.

<sup>4</sup> Based on the weighted average number of shares.

<sup>5</sup> Prices adjusted for capital increase.

## *Dear Stakeholders,*

A company's long-term success depends on its ability to define clear business goals and areas of responsibility. Equally important, however, is a common value system. Especially if that company is managing the integration process that accompanies an acquisition or merger.

Following the acquisition of BOC and the comprehensive restructuring measures that involved, The Linde Group is now in the process of integrating Linde and BOC. The fact that both companies already shared similar values – values that evolved organically over time – has proven hugely beneficial in this process. We merged these values soon after “day one”, drawing on the results of a global employee survey to capture “The Linde Spirit” in writing. This joint mission statement distills the core philosophies of both companies and projects them into our joint future by setting down the need to actively live our sense of Corporate Responsibility.

Linde currently generates around ninety percent of sales in countries other than Germany and over fifty percent outside Europe. This only serves to sharpen our awareness that Corporate Responsibility extends beyond national borders and financial profit.

Many of our engineering technologies or medical and industrial gas applications already help provide answers to today's global challenges. And they are set to play an even greater role in the future, as we contribute to climate protection, for example, or promote the efficient use of natural resources. As one of the largest suppliers of hydrogen worldwide, we are researching the possibilities of this hugely promising energy carrier as an innovative storage and transport medium for renewable sources of energy, for instance. We are also harnessing our scientific and technical expertise to develop various processes for the geological storage of carbon dioxide, both to enable purification and recycling and to prevent its release into the atmosphere in the first place.

However, it is not only our solutions and products that define who we are. We ourselves do this through our everyday behaviour. This year we introduced a new Code of Ethics to steer our employees in the right direction and help them handle the growing challenges of our global business. The personal integrity of each individual plays a key role in protecting our company against unnecessary risks and cementing our good reputation. We support our staff in every way possible to maintain high standards in these areas.

*“Linde currently generates around 90 percent of sales in countries other than Germany and over 50 percent outside Europe.”*

Professor Dr Wolfgang Reitzle

Linde's footprint now extends to over seventy countries. We are perceived not only as an industrial gases and engineering company, but also as a member of the local societies and cultures in which we are active. We welcome and encourage social commitment by our employees – whether in the form of a one-off donation or ongoing personal involvement in a specific cause or activity. At Linde, we urge our employees to see themselves as part of a global organisation that reaches out to other cultures and people in an open-minded, harmonious and responsible spirit, always living the values of that organisation.

As an organisation, we obviously have to decide which specific social issues we wish to focus on. The Linde Group particularly supports education, science and research.

Health and safety has always been a key priority for us, particularly when it comes to direct contact with our products.

Combining the best of both worlds, The Linde Group – as BOC before it – has now established a Group-wide SHEQ department. SHEQ stands for safety, health, environment and quality. The department's responsibilities include integrating health and safety in all processes, providing safety training for staff and customers, minimising hazards in the workplace and protecting the environment in all work-related matters. Our top priority here is to keep the number of occupational accidents as low as possible.

The Linde Group uses clear and consistent communication to ensure a uniform understanding of our Corporate Responsibility. We concentrate on five key dimensions here, with concrete goals in each case. These are: employees, SHEQ, corporate citizenship, ethics and compliance, and capital markets.

I am convinced that living our Corporate Responsibility strengthens our internal and external identity, and will continue to pay off in many different ways for you, our stakeholders, in the future.

I hope you enjoy reading this first Corporate Responsibility Report from our new restructured company.



A handwritten signature in blue ink, which appears to be 'W. Reitzle', written in a cursive style.

Professor Dr Wolfgang Reitzle  
Chief Executive Officer of Linde AG

# Facets of involvement – in the words of the Linde AG Executive Board

Every single employee plays a role in ensuring that Linde steps up to its responsibilities in all areas. The Linde AG Executive Board strongly believes that the success of our efforts depends on the Group as a whole actively living our sense of Corporate Responsibility.



**Professor Dr Wolfgang Reitzle**

Born 1949

Doctorate in Engineering (Dr.-Ing.)

Degree in Business and Industrial Engineering (Dipl.-WirtschaftsIng.)

President and Chief Executive Officer

Responsible for: Gist Division, Central

Functions Corporate Communications &

Investor Relations, Group Information

Services, Group Human Resources, Group

Legal, Internal Audit, SHEQ, Six Sigma,

Corporate Strategy, Innovation Management

Member of the Executive Board since 2002

“We will remain on the sustainable growth path, thanks to our holistic perception of Corporate Responsibility, which we hard-wire into all our business processes. This adds value and benefits our stakeholders – employees, shareholders, customers and business partners.”



**Dr Aldo Belloni**

Born 1950  
 Doctorate in Chemical Engineering (Dr.-Ing.)  
 Responsible for: Regional Business Units Europe, Middle East, Greater China, South East Asia, Engineering Division, Global Business Unit Tonnage (On-Site), Business Area Electronic Gases  
 Member of the Executive Board since 2000

“Responsible behaviour includes protecting the environment, since we are also accountable to future generations. I am proud of Linde’s pioneering technologies here, including our hydrogen innovations and solutions for separating and storing the greenhouse gas carbon dioxide.”



**J. Kent Masters**

Born 1960  
 BS Chemical Engineering, MBA Finance  
 Responsible for: Regional Business Units Americas and Africa, South Pacific, Global Business Unit Healthcare, Business Areas Bulk and Packaged Gas & Products  
 Member of the Executive Board since 2006

“BOC’s experience forms an integral part of The Linde Group’s new, all-embracing Corporate Responsibility strategy, particularly when it comes to occupational safety and the social involvement of employees. It is very important that the Group continue to prioritise social and community projects such as our initiative in South Africa.”



**Georg Denoke**

Born 1965  
 Degree in Information Science  
 Degree in Business Administration  
 Responsible for: Central Functions Group Accounting & Reporting, Operations FiCo/Invest, Procurement, Group Treasury, Mergers & Acquisitions, Growth & Performance, Risk Management, Tax  
 Member of the Executive Board since 2006

“Analysts and investors are increasingly interested in the way Linde addresses issues such as climate change and environmental protection. We will therefore be pushing the evaluation and measurability of non-financial data under our Corporate Responsibility strategy. After all, our aim is to achieve maximum transparency.”

# About this report

Linde began publishing dedicated information on Corporate Responsibility a good two years ago, and published its first standalone report on the topic in autumn 2005. BOC, the British gas company acquired by Linde in September 2006, had previously included various aspects of its Corporate Responsibility policy in its annual reports, covering areas such as safety, environmental protection and social issues. So this Corporate Responsibility Report is the first for the new Linde Group. Its purpose is to record, structure and prioritise the key issues around the five dimensions we have defined:

- Capital markets
- Ethics and compliance
- Corporate citizenship
- Human resources
- SHEQ (safety, health, environment, quality)

Against the background of comprehensive restructuring within the new expanded group, capturing and defining key indicators concerning human resources and health, safety and the environment (HSE) presents a particular challenge. To gradually increase measur-

ability – and therefore transparency – the responsible departments, Corporate Responsibility and SHEQ, have set concrete targets.

**In 2006/2007, these involved:**

- standardising key indicators and definitions for Linde and BOC
- creating a comprehensive Corporate Responsibility Report in 2007 by broadening the scope of data collected for the 2006 Annual Report and taking external requirements into consideration
- identifying significant indicators for sustainability at Linde

**For 2008, our plans include:**

- establishing a Group-wide, standardised, web-based data capture tool
- deriving key performance indicators (KPIs) from the indicators identified to measure Linde’s sustainability

Our long-term aim is to define quantitative objectives based on the KPIs.

The structure of this report mirrors our operating model (see below). So we provide information about activities and initiatives

**The way we identify the materiality of Corporate Responsibility issues**



within the Engineering and Gist Divisions and throughout all nine Regional Business Units (RBUs) of the Gases Division. This also includes the Global Business Units and Business Areas. This clearly sets our frame of reference – the report covers all consolidated companies in which Linde has at least a 50 percent stake.

Neither Linde nor BOC released any Corporate Responsibility publications in 2006. With the exception of the key indicators, our current reporting period is therefore 1 January 2006 to 30 June 2007. Our key indicators for health, safety and the environment (HSE) apply to calendar year 2006, and HR figures to the period 1 January 2007 to 30 April 2007. The report follows current, internationally recognised recommendations by the Global Reporting Initiative (GRI). The Linde Group plans to publish regular sustainability reports at intervals to be decided with the next report. The year of publication will be announced in the Internet.

→ [www.globalreporting.org](http://www.globalreporting.org)

We are particularly keen to address all queries, comments and improvement suggestions our stakeholders made in the 2006 online survey. We would like to take this opportunity to thank you for your participation.

→ [www.linde.com](http://www.linde.com)

You can find more detailed information, not included in this report for space reasons, online at

→ [www.linde.com](http://www.linde.com)

# Corporate Responsibility Management

## Corporate Culture

In April 2007, the Executive Board gave its seal of approval to the "Linde Spirit". This corporate philosophy defines the three basic elements of our company's culture. In other words, the vision, values and principles that guide the way we do business.

Corporate responsibility management focuses bridges the gap between abstract ideas and concrete value management. It focuses on how the values as defined in our vision are to be gradually implemented in our daily operations and dealings.

The Linde Spirit combines with corporate responsibility management to create an umbrella framework that guides the actions of all Linde employees and divisions across the globe (see figure 4). Both elements are crucial building blocks in our common identity.

## Organisation

The key areas of our corporate responsibility strategy are defined by the Corporate Responsibility Council, a body that was founded in 2004. Following the acquisition of BOC, two further members were appointed to the Council.

The Council has also expanded its areas of activity. "Ethics and compliance" has now been added to the existing organisational areas of activity (employees, environment, corporate citizenship and capital markets), a move that reflects the importance of this subject for both our company and our stakeholders.

"Environment" has been renamed "SHEQ" (Safety, Health, Environment, Quality) to reflect our wider understanding of this subject and our awareness of how the individual facets (occupational safety, environment, health and quality) are intertwined.

Each year, the Corporate Responsibility Council (see figure page 014) creates a roadmap detailing the goals for its five areas of activity (see page 018). These objectives align with The Linde Group's voluntary Corporate Responsibility policy (see page 016).

The Corporate Responsibility Council meets twice a year. The decisions it reaches are binding for the entire organisation.

The Corporate Responsibility unit is responsible for implementing the Council's decisions. This central function is anchored within the umbrella Corporate Communication & Investor Relations function at headquarter level.

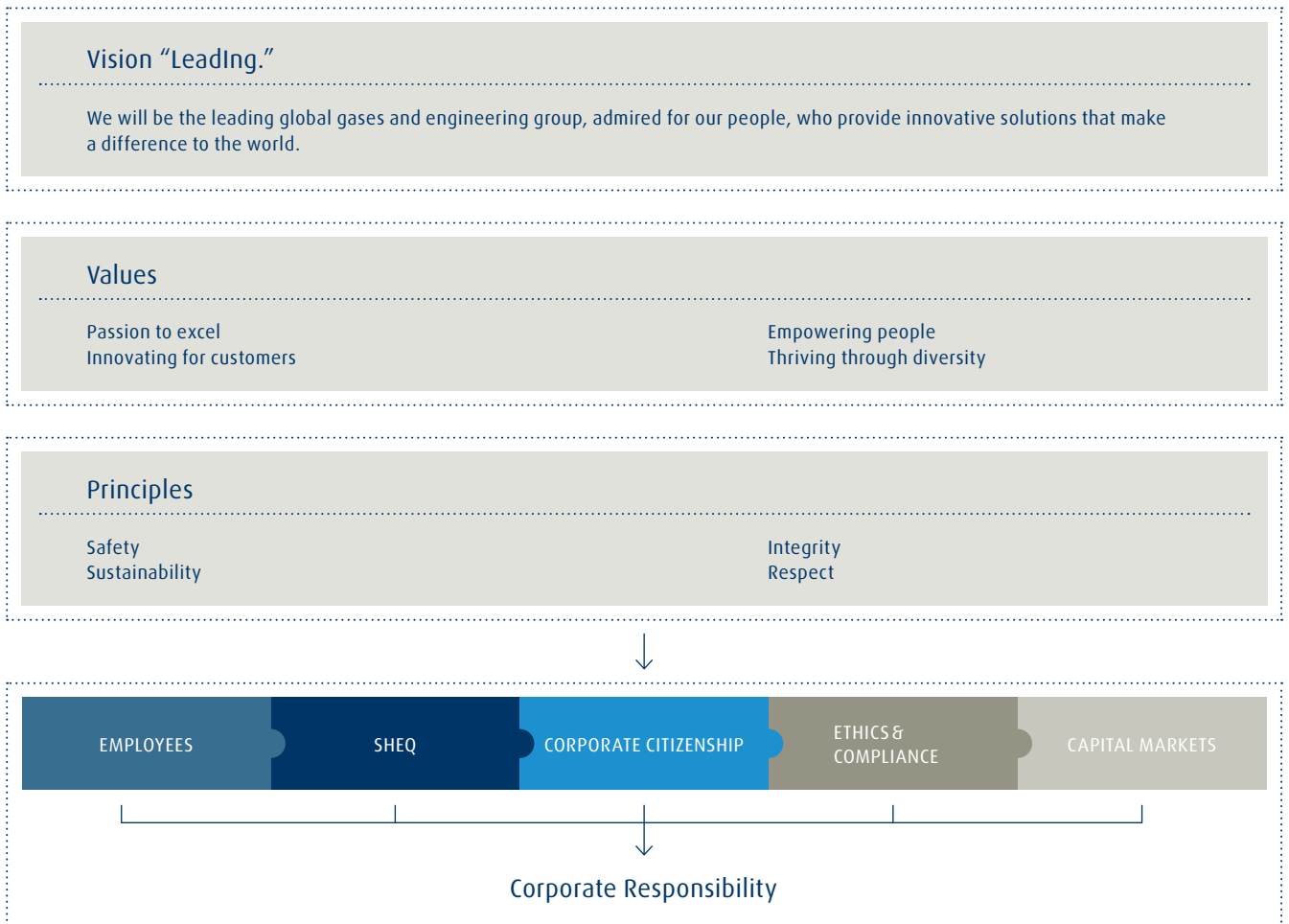
Professor Dr Wolfgang Rietzle, Chief Executive Officer of Linde AG, and Dr Aldo Belloni, Member of the Executive Board, are members of the Council together with managers responsible for the following Group-wide areas:

- Corporate Communications & IR
- Human Resources
- Internal Audit
- Legal
- SHEQ

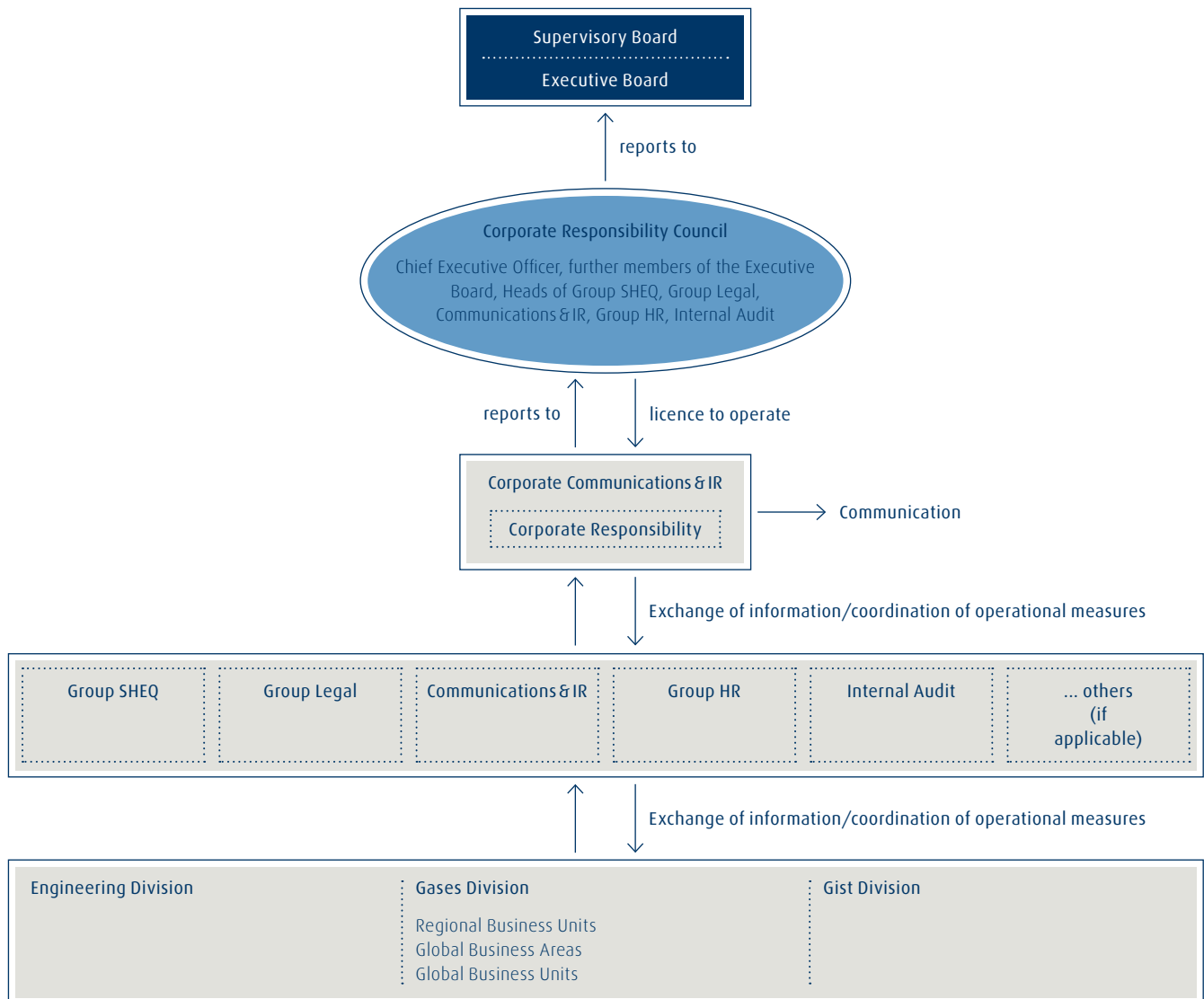
Depending on the area in question, the Council must also work very closely with different departments within the company such as Innovation Management or Corporate Strategy.



The corporate responsibility concept at Linde AG



Corporate Responsibility roots within the company



## Stakeholder dialogue – 2006 survey

The trust our stakeholders place in us is a great asset, and we strive to justify and strengthen this trust through open dialogue.

Which is why Linde conducted a stakeholder survey on the subject of corporate responsibility in July 2006. Around 1,500 stakeholders in France, Great Britain, Sweden, Austria, the Czech Republic and Germany – Linde's key markets at that time – took part in the survey. The participants came from the following areas:

- Business (business partners and other companies) (40.6%)
- Capital markets (analysts and investors) (15.5%)
- Science and research (13.4%)
- Non-government organisations (13.4%)
- Lobbyists (trade associations and other organisations) (5.9%)
- Politics (governmental organisations, politicians) (5.3%)
- Other stakeholders not assigned to a specific group (5.9%)

The response rate was 12.7%. (see also page 028)

### The most important results at a glance:

- Stakeholders would like more transparency and increased public commitment to key community issues such as climate change.
  - In the course of this year, Linde has actively addressed this issue and analysed the opportunities and risks (see page 052). The company is a member of several national and international organisations that have made climate protection a high priority. These include UN Global Compact.
- The corporate responsibility roadmap is regarded as an important step in the right direction. Nevertheless, stakeholders would like to see some aspects, such as the Code of Ethics, more strongly aligned with international standards.
  - Linde drew up a new, improved Code of Ethics that corresponds to international standards. Furthermore, we have implemented a notification system for the first time at Linde and are currently establishing a compliance organisation for the entire company.
- The general view is that Linde makes a significant contribution to environmental protection. However, this potential could be further focused through targeted, sustainable product development.
  - Linde is placing more emphasis than ever on products that make a contribution to climate protection. This not only includes developments in the field of hydrogen, but also all other technologies geared towards increasing energy efficiency and cutting emissions.
- In addition to reporting on the company's achievements, Linde should also provide information on the sometimes difficult path to success as well as any dilemmas and problems encountered on the way.
  - This report provides a balanced view of our successes and the obstacles we have had to face.
- Voluntary contributions to society should be closely tied to Linde's core business and build on its clearly defined corporate values.
  - In the new organisation, our voluntary social activities are aimed at suitable target areas such as education, science and research.
- Linde has a good chance of achieving higher ratings in SRI indexes and funds.
  - We have carefully analysed the extensive feedback from the survey and taken appropriate action (see page 031).

# Corporate Responsibility Policy

## Philosophy

Positioned as a leading industrial gases and engineering company, The Linde Group has built its business on the following four cornerstones:

- Passion to excel
- Innovating for customers
- Empowering people
- Thriving through diversity

We see these values at the heart of our competitive abilities and long-term success. They underpin and contextualise our role within society, guiding our actions wherever our business takes us.

Every Linde employee undertakes to acknowledge and actively implement the guidelines set out in our Corporate Responsibility policy.

## Principles

Linde undertakes to behave responsibly towards its shareholders, business partners, employees, society and the environment – in every one of its business areas, regions and locations across the globe.

Linde is committed to technologies and products that unite the goals of customer value and sustainable development.

Linde secures its future by investing in staff, research and development and by tackling the problems and challenges facing the world today.

## Guidelines

### Markets

- We believe in a value-driven management style, with business policies that are aligned with the interests of our company, its shareholders and its stakeholders.
- We promote good corporate governance, constantly strengthening the sense of responsibility that governs our management and supervisory activities.
- Our activities revolve around the best interests of our customers.
- We offer in-depth, end-to-end technical solutions.
- We are firmly committed to free and fair competition and deal with our competitors and business partners in accordance with the Linde Code of Ethics.

### Employees and society

- We maintain an atmosphere of respect and openness both within our company and in our business interactions.
- We believe in personal development and ongoing learning, offering our employees a wide variety of opportunities to achieve their personal potential.
- We make our knowledge and expertise available to society as a whole and secure our success through a willingness to cooperate with other organisations.
- We are open to other cultures and lifestyles and like to take different experiences and perspectives on board.
- Equal opportunities are hardwired into all aspects of our work.
- We promote education and research projects that are closely linked to our core business.

### SHEQ – Safety, Health, Environment and Quality

All our activities are guided by a clear umbrella principle:  
 “At The Linde Group we do not want to harm people and the environment.”

Our activities align with the Linde Group SHEQ Policy.

This commits us to ensuring that all of our business operations are executed in accordance with strict safety, health, environment and quality standards.

- We all take a personal responsibility for SHEQ
- Managers at all levels demonstrate visible leadership
- We apply this policy in our day to day behaviour
- Safety, health, care for the environment and quality are prerequisite to any business we undertake

### Obligation

We fulfil our duty of accountability towards our shareholders, employees, customers, business partners and the general public through regular and accurate reporting.

All our company guidelines are in harmony with our Corporate Responsibility policy.

The Executive Board



Professor Dr Wolfgang Reitzle



Dr Aldo Belloni



J. Kent Masters



Georg Denoke

Area of activity

EMPLOYEES >	Integration
>	Driving innovation
>	Work/family balance
SHEQ >	Organisation, management, programmes
>	Environmental and climate protection
>	Product stewardship
>	Health and safety
>	Health, safety, environment (HSE) metrics, key performance indicators (KPIs), reporting
CORPORATE CITIZENSHIP >	Education, science, research
>	Healthcare
>	Environmental protection
>	Local commitment/charity work
ETHICS & COMPLIANCE >	Guidelines, management, programmes
CAPITAL MARKETS >	Guidelines, management, programmes

## 2006 objectives

## Achieved in 2006

- |   |   |
|---|---|
| → Adjustment of vision, values and principles to our new company culture.   | → 250 managers worldwide asked for feedback on the company culture.<br>→ Approval of our vision, values and principles by the Executive Board.  |
| → Launch of Inventors Club as a Group-wide innovation forum.<br>→ Awarding of first prizes to the ten best patents across two categories.   | → Invitation to join Linde Annual Patent Awards for Linde and BOC's patent applications for the period 1 January to 31 December 2006.   |
| → Evaluation of various models for our Germany locations, including childcare arrangements and in-house facilities.   | → Free-of-charge allocation of childcare places for all employees in Germany introduced in response to an employee survey.  |
| → Introduction of more standardised management of global safety and environmental protection in the Gases and Engineering Divisions.<br>→ Promotion of cross-divisional, worldwide integration.                     | → First Group-wide health, safety and environment conference in May 2006.<br>→ Establishment of a Group-wide SHEQ department within the new organisational structure.<br>→ Approval and introduction of Group-wide SHEQ policy.                 |
| → Establishment of foundation for standardised environment and climate-protection strategy.<br>→ Ongoing research into hydrogen technology and renewable sources of energy.   | → Identification of relevant processes both in production and application of specific industrial gases.   |
| → Verification that legal regulations and product safety standards worldwide are met.   | → Improvement in delivery of product information (safety datasheets) to customers worldwide.  |
| → Reduction of lost workday cases through appropriate measures.<br>→ Expansion of LIPROTECT® customer programme (see glossary).   | → Consolidation and alignment of Linde and BOC's health and safety objectives and programmes.<br>→ Definition of objectives, programmes and responsibilities for the new organisation.<br>→ Consolidation of accident reporting at Group level. |
| → Definition of scope of non-financial metrics in accordance with materiality and internal requirements.<br>→ Standardisation of metric definitions.<br>→ Group-wide reporting.<br>→ Definition of Group-wide KPIs. | → Review of data acquisition processes at Linde and BOC.<br>→ Standardisation of most important metric definitions.<br>→ Specification of core metric and publication in 2006 Annual Report.  |
| → Review and evaluation of all activities supporting this area.   | → Review, evaluation and classification of activities including BOC analogous to the operating model.   |
| → Promotion of innovation and research in various medical applications of gases using the GEMI Fund (Gas-Enabled Medical Innovations).  | → "Inspire Award" established by BOC – also a grant supporting medical applications of gases, focusing on empirical application research. BOC awarded this twice in 2006.<br>→ Linde and BOC promotional activities continued in parallel.      |
| → Inclusion of "BOC Foundation for the Environment" in the CR portfolio.  | → Following a careful review of the BOC Foundation, decision taken to finish all existing projects but start no new ones.   |
| → Review of individual local activities worldwide.  | → Performance of review, including BOC charity activities.  |
| → Generation of ethical guidelines for procurement.<br>→ Introduction of an advisory system ("Integrity Line").   | → Publication of ethical procurement guidelines.<br>→ Review of Linde and BOC compliance activities.<br>→ Formation of a Code Working Group to develop a new code of conduct for the new organisation.  |
| → Intensification of stakeholder dialogue.  | → Performance and analysis of stakeholder survey in six countries.<br>→ Evaluation and consolidation of Linde and BOC Corporate Responsibility activities.  |

## Achieved in June 2007

## 2007/2008 objectives

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>→ “The Linde Spirit” approved by the Executive Board in April 2007 and rolled out through global workshops.</li> <li>→ Definition of a human resources (HR) roadmap with objectives including successful HR support for the integration process, fostering a value and performance-orientated company culture and targeted promotion of employee skills in emerging markets.</li> </ul> | <ul style="list-style-type: none"> <li>→ Anchoring “The Linde Spirit” (see page 012).</li> <li>→ Implementation of HR roadmap.</li> </ul>  |
| <ul style="list-style-type: none"> <li>→ Renewed invitation to join Annual Patent Awards.</li> </ul>   | <ul style="list-style-type: none"> <li>→ Awarding of 2007 prizes to a total of ten winners in the categories “technological innovation” and “innovation with the highest monetary value or competitive advantage”.</li> </ul>  |
| <ul style="list-style-type: none"> <li>→ Evaluation of success of allocation service by Linde employees.</li> </ul>  | <ul style="list-style-type: none"> <li>→ Expansion of existing offering in Germany if appropriate.</li> </ul>  |
| <ul style="list-style-type: none"> <li>→ Implementation of the term “SHEQ” and development of Group-wide management structure.</li> <li>→ Conference for all SHEQ managers at Regional Business Unit level in March 2007 to define the Group-wide SHEQ strategy, objectives and programmes.</li> <li>→ Communication of SHEQ policy and strategy within the Group.</li> </ul>  | <ul style="list-style-type: none"> <li>→ Ongoing monitoring of objectives achieved.</li> <li>→ Implementation of a global SHEQ information and documentation management system.</li> <li>→ Development of an employee information platform for SHEQ.</li> </ul>  |
| <ul style="list-style-type: none"> <li>→ Systematic analysis of opportunities and risks of climate change; presentation of results to Executive Board (see also page 052).</li> <li>→ Continuation of previous activities and projects across all business areas relevant to climate protection.</li> </ul>  | <ul style="list-style-type: none"> <li>→ Concentration on individual aspects of climate protection, e.g. participation in Emissions Trading Scheme (ETS) and optimisation of energy efficiency in our production facilities (ongoing).</li> <li>→ Increased efficiency for our transport fleet.</li> </ul> |
| <ul style="list-style-type: none"> <li>→ Continuation of activities with particular focus on REACH requirements (see glossary).</li> </ul>   | <ul style="list-style-type: none"> <li>→ Introduction of improved, Group-wide product information standards, observing REACH and GHS (globally harmonised system for hazardous substance labelling, see glossary).</li> <li>→ Targeted audits for new product launches.</li> </ul>                         |
| <ul style="list-style-type: none"> <li>→ SHEQ awareness-raising training for all employees worldwide by the Group SHEQ Department.</li> <li>→ Development and introduction of a Driver Safety Programme for strategic avoidance and reduction of transport accidents.</li> <li>→ Introduction of quarterly reporting on accident figures.</li> </ul>   | <ul style="list-style-type: none"> <li>→ Continuation and further development of the health and safety programme.</li> <li>→ Enhancement of training measures.</li> </ul>  |
| <ul style="list-style-type: none"> <li>→ Continuation of review and definition of important additional HSE metrics based on external standards.</li> <li>→ Acquisition of HSE metrics for 2007 CR Report.</li> </ul>   | <ul style="list-style-type: none"> <li>→ Group-wide introduction of web-based reporting tool.</li> <li>→ Expansion of scope of HSE metrics collected.</li> <li>→ Coordination and introduction of KPIs as measurement tool. Derivation of reduction objectives where possible.</li> </ul>                  |
| <ul style="list-style-type: none"> <li>→ Continuation of BOC e-learning programme “Inspiring Gases”.</li> </ul>  | <ul style="list-style-type: none"> <li>→ Evaluation of opportunities to promote education with increased impact on recruitment.</li> <li>→ Launch of new initiatives if applicable.</li> </ul>   |
| <ul style="list-style-type: none"> <li>→ The GEMI Fund board of trustees selected eight scientists in June 2007 to receive a total of USD 1 million in the period 2007/08 for their research projects.</li> </ul>  | <ul style="list-style-type: none"> <li>→ Linde aims to become a preferred research partner for the development of innovative therapies using medical gases.</li> <li>→ Strengthened research collaboration with scientists in hospitals and universities worldwide.</li> </ul>                             |
| <ul style="list-style-type: none"> <li>→ Continuation and conclusion of some ongoing environmental projects.</li> </ul>  | <ul style="list-style-type: none"> <li>→ Evaluation of opportunities to promote environmental protection within a more global framework.</li> </ul>  |
| <ul style="list-style-type: none"> <li>→ Continuation of selected programmes at Regional Business Unit level.</li> </ul>   | <ul style="list-style-type: none"> <li>→ Ongoing activities.</li> </ul>  |
| <ul style="list-style-type: none"> <li>→ Preparation for publishing the Code of Ethics and launching the Integrity Line.</li> </ul>  | <ul style="list-style-type: none"> <li>→ Definition of ethical procurement guidelines for The Linde Group.</li> <li>→ Establishment of a global compliance organisation.</li> </ul>  |
| <ul style="list-style-type: none"> <li>→ Signing of UN Global Compact climate protection initiative by Linde.</li> </ul>   | <ul style="list-style-type: none"> <li>→ Third international hydrogen day at Linde AG.</li> <li>→ Publication of 2007 Corporate Responsibility Report.</li> <li>→ Socially responsible investor (SRI) roadshow.</li> </ul>   |



# CORPORATE RESPONSIBILITY ROADMAP

>> *Our Corporate Responsibility roadmap is structured according to five main areas of activity – employees, SHEQ, corporate citizenship, ethics and compliance, and capital markets. In each of these dimensions, we have defined objectives and measures that we aim to achieve across the entire Group.*

# Corporate Governance

## Corporate structure and executive bodies

Linde AG, a corporation with its headquarters in Munich, is subject to German law. The Linde Group has a two-part management and supervisory structure, the Executive Board and the Supervisory Board. The Executive Board and the Supervisory Board are responsible for representing the shareholders' interests and looking after the welfare of the company. The Shareholders' Meeting is the company's third executive body.

### Executive Board

The Executive Board of Linde AG manages the company and conducts its business. It is bound to the interests of the company and is responsible for achieving sustainable increases in company value.

The Executive Board decides on the strategic direction of the company, obtains the Supervisory Board's approval of this, and ensures that the overall strategy is implemented. Moreover, it is responsible for annual and multi-year budgets and for the preparation of quarterly, annual and Group financial statements. In addition to ensuring that appropriate risk management procedures are adopted, the Executive Board is also responsible for providing the Supervisory Board with prompt and regular reports covering all strategic issues relevant to the Group, medium-term business plans, business developments, the risk situation and risk management. Procedures and transactions of fundamental importance which are executed by the Executive Board must be approved by the Supervisory Board. During their term of office, members of the Executive

Board are strictly bound not to engage in any activities that would compete with the company's interests. They must immediately disclose any conflicts of interest which arise to the Supervisory Board and notify their fellow board members. Executive Board members may not be older than 65. The company has taken out consequential loss liability insurance (Directors and Officers Insurance or D&O) for the members of the Executive Board and the Supervisory Board, with an appropriate excess.

The Executive Board of Linde AG currently comprises five members. Effective as of 31 December 2007, Trevor Burt, member of the Executive Board and responsible for the China, South and East Asia and South Pacific Regional Business Units as well as for the Cylinder and Electronic Gases business areas, has decided to resign from the board for personal reasons. The Supervisory Board has approved the move. Trevor's departure will bring the number of Linde AG Executive Board members down from five to four. Responsibilities within the Executive Board were already reassigned on 1 August 2007.

### Supervisory Board

The Supervisory Board consists of 16 members. It appoints the Executive Board, and advises and supervises it in its management of the company.

In accordance with the German Codetermination Law (Mitbestimmungsgesetz), the Supervisory Board has equal numbers of shareholder and employee representatives. Shareholder representatives are elected at the Shareholders' Meeting, while the employee representatives are elected in accordance with the provisions of the German Codetermination Law. Members of the Supervisory Board may not be older than 72.

In financial year 2006, the Supervisory Board primarily dealt with the acquisition of the British industrial gases company BOC and the sale of the Material Handling business segment (forklift trucks and warehouse equipment).

In total, the Supervisory Board held four scheduled and two unscheduled meetings in financial year 2006. All members of the Supervisory Board attended at least half of the meetings.

## Procedural rules governing the Executive Board and the Supervisory Board

Both the Executive Board and the Supervisory Board are governed by procedural rules. The procedural rules for the Supervisory Board also include provisions ensuring that this board has a sufficient number of members who are sufficiently independent. If some of the members of the Supervisory Board have been or are currently on the Executive Boards of companies with which Linde has business relationships, transactions with these companies take place under the same conditions as those that apply to other companies. In our view, these positions do not therefore compromise the independence of the members of the Supervisory Board concerned.

## Addressing conflicts of interest

Members of the Supervisory Board inform the Supervisory Board of conflicts of interest arising from any advisory or executive role in other companies. Significant conflicts of interest, unless temporary, will result in the removal of the member from his or her seat on the board. In its report to the Shareholders' Meeting, the Supervisory Board provides information about conflicts of interest and how they have been addressed.

## Declaration of compliance with the German Corporate Governance Code

Linde AG has declared its compliance with the German Corporate Governance Code every year since 2002. Compliance with the provisions of this code is continuously monitored. In 2006, Linde placed particular emphasis on compliance with the code as amended on 12 June 2006. The Executive Board and Supervisory Board issued an updated declaration of compliance on 9 March 2007, pursuant to section 161 of the German Stock Corporation Law (Aktiengesetz): "With the publication of its 2006 Annual Report on 12 March 2007, Linde AG has complied and will in future comply with all the recommendations of the Government Commission on the German Corporate Governance Code as amended on 12 June 2006."

The declaration is publicly available at all times on the Linde website at [www.linde.com](http://www.linde.com). This also applies to detailed information about Shareholders' Meetings, Supervisory Board committees and notification of directors' dealings.

The Linde 2006 Annual Report contains the Supervisory Board report, remuneration reports from the Executive Board and Supervisory Board as well as Linde AG's detailed Corporate Governance report. Linde regards Corporate Governance as a continuous process and continues to carefully monitor all developments in this area.

## Risk management

We also deploy a sound risk management strategy to secure sustainable growth. As part of this approach, we focus on opportunities that enable us to expand our business while ensuring that we are both systematically and comprehensively protected against potential risks.

### Systematic management

The Linde Group's risk management system comprises a variety of interconnected processes. One key step, for example, involves the early and systematic identification of risks based on predefined criteria. Once identified, the risks are assessed and scoped in qualitative and quantitative terms. These results are then used to take appropriate action aimed at reducing, transferring and preventing risks.

This process of systematically recording, controlling and limiting risks aligns directly with the Group's operative structure. It is integrated in our operational procedures and closely linked to the controlling processes.

The risk management department also works closely with the internal insurance department to create incentives for investing in appropriate preventative measures.

### Organisation

A streamlined, central risk management team implements a number of measures, such as defining standards, to ensure that uniform risk management processes are implemented throughout the Group.

As each division has different requirements based on the type of business it conducts, individual risk managers are also appointed at division level. This guarantees that the risk management processes meet the specific needs of the different divisions.

### Identifying risks

The different risk categories are derived directly from the success factors key to our corporate strategy and goals. As a result, our business risks may vary greatly from one division and geographical region to another.

The principle areas of risk that may significantly impact our business performance, net assets, financial position and results of operations are set out every year in the Group Annual Report. These include:

#### → Economic trends in relevant markets

To compensate for these risks, we have greatly diversified our global industrial gases and engineering activities across regions and customer segments.

#### → Risks in politically unstable countries

These risks include the nationalisation or expropriation of assets, the prohibition of capital transfer, legal risks, war and other forms of unrest. To manage these risks, we have implemented risk assessment tools that evaluate potential risks to net assets, financial position and results of operation. At the same time, individual investment schemes are evaluated with regard to political risks.

#### → Impact of high purchase prices on profitability

In the case of purchases, potential risks relating to the availability, quality and cost of raw materials, energy, input materials and intermediate products may have an adverse effect on Group profitability. We reduce these risks in procurement markets through a number of measures, including a global sourcing policy, long-term supply contracts and ongoing supplier reviews.

→ **Specific demands resulting from complex, major plant engineering projects**

Potential risks may particularly arise when calculating the cost of complex projects. These risks include unexpected technical problems, delivery bottlenecks and unforeseeable developments during on-site assembly. To identify risks as early as possible, we use numerical analysis methods to simulate the opportunities and risks of each project.

→ **Continuity – seamless flow of young talent**

The commitment, competence and performance of our personnel are crucial to our future success. This is why we place great value on employee training and development. Management positions are regularly evaluated to ensure effective succession planning and suitable candidates are identified to reduce any personnel risk.

We record and analyse risk reports using a web-based system. This data is channelled into a watchlist – an additional controlling tool established at Linde in 2006. The watchlist is a quarterly risk report that informs the Executive Board of the current risk situation. Based on criteria such as equity or debt, the report draws our attention to situations in companies, for instance, that may require action on our part. Monthly reports and business review meetings between operative managers and the Group Executive Board also help us monitor risks to the company.

The Audit Committee of the Supervisory Board is also informed of the risk situation at regular intervals. In the event of any significant changes to the situation, the individual risks are recorded via an ad-hoc reporting system.

In addition, internal and external auditors regularly review the efficiency of our risk management system in line with statutory regulations.

# Capital markets

Linde aligns its communication with the needs and interests of its various stakeholder groups. Investor relations form a particularly important part of our corporate communications. Our financial reporting is targeted at our shareholders and other capital market players such as investors, analysts and financial media.

Legal regulations are playing an increasingly important role in investor relations. The primary objectives here are transparency and prompt and reliable information, enabling all market players to form an accurate assessment of Linde's development. To further increase trust in our company, Linde follows the principles of effective financial communication as defined by the German Association of Financial Analysis and Asset Management (DVFA). This covers alignment with capital market needs, equal treatment of all shareholders, materiality, traceability, timeliness and expectation management.

We maintain a financial calendar to inform the public of key dates, which we publish in our annual and interim reports and on the company website. Our next shareholders' AGM takes place on 3 June 2008 in Munich.

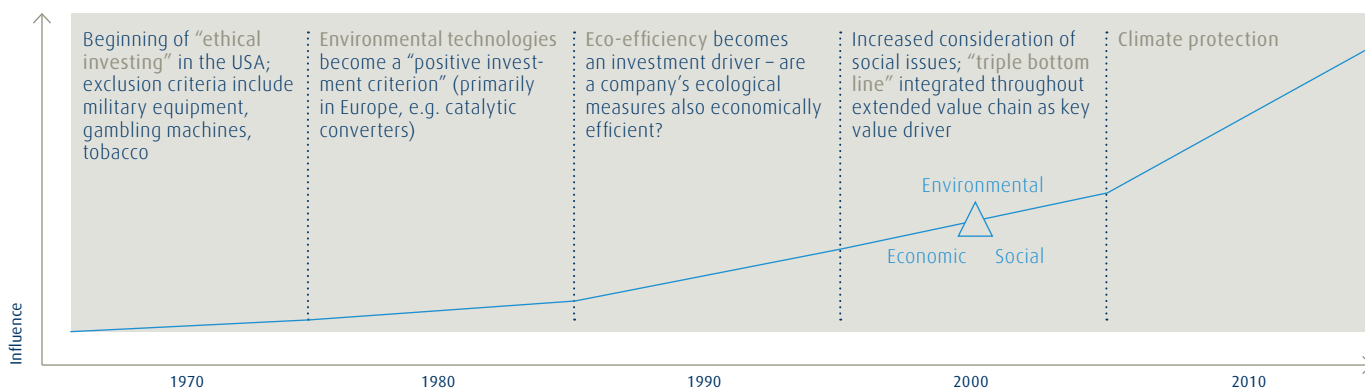
## Activities 2006/2007

The acquisition of BOC prompted a very intensive level of communication with shareholders and potential investors in 2006. We outlined our strategy at all the major international financial centres through numerous personal discussions, conferences and roadshows, and received very positive feedback.

In 2007, we have continued and expanded these activities, providing our investors with compelling proof of the new company's long-term growth prospects.

Over the coming months, we will also be holding socially responsible investing (SRI) roadshows, bringing targeted presentations on our climate and environmental protection strategy to the capital market.

### Historical overview of evolving criteria governing socially responsible investing (SRI)



## Socially responsible investments (SRI)

In the medium term, Linde aims to be admitted to indices and funds that exclusively list companies managed in accordance with the principles of sustainable growth. Companies that qualify for these indices must satisfy strict criteria, which have evolved internationally over several decades (see page 026). Alongside economic factors, prospective companies are also evaluated for the degree of responsibility they show towards natural resources, employees and society as a whole. Linde's Corporate Responsibility strategy is specifically geared towards these aims.

As part of the move to have our share admitted to the European Dow Jones Sustainability Index (DJSI), for example, we underwent an extensive sustainability analysis by a ratings agency, the Zurich-based Sustainable Asset Management (SAM) Group, in November 2006.

## SAM Group analysis

SAM Group performs assessments for DJSI. SAM Group assumes that the challenges facing Linde as a chemicals company will be focused on environmental and corporate citizenship issues. According to SAM, issues relevant to the chemical sector worldwide include demographic trends and climate change. Integrating sustainability in the corporate strategy and focusing on long-term shareholder value are of critical importance here.

SAM is of the view that Linde demonstrates strong potential for assuming an exemplary role on the sustainability front. To achieve this, we need to further improve the measurability of our environmental activities and strengthen our position on climate change. SAM sees social commitment as one of Linde's particular strengths.

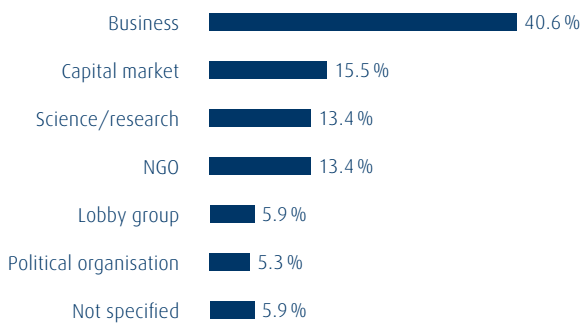
As in previous years, Linde has again participated in the DJSI selection procedure in 2007.

### Stakeholder feedback

The results of the SAM analysis overlap to a large extent with those of our stakeholder survey. We incorporated a comparatively high ratio of capital-market players in our stakeholder pool (see graphic, below), most of whom are SRI analysts specialising in the chemical industry or experts with similar backgrounds, and asked them: "Drawing on your knowledge of the company to date, do you view the Linde share as a promising investment for sustainability/SRI indices and funds?" (see graphic, right).

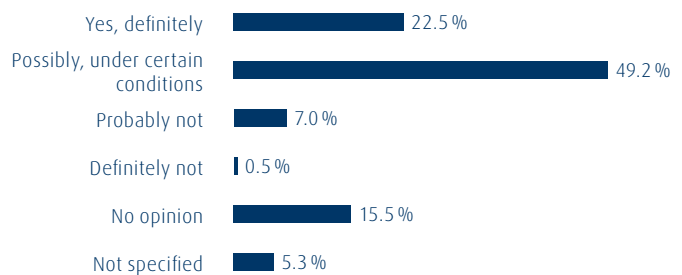
The response is encouraging, with 22.5 percent of all respondents unreservedly viewing Linde as a sustainable investment. Another 49.2 percent view the Linde share as a promising investment under certain conditions. To gain a better overview, we have collated these prerequisites in a table (see graphic, pages 030/031). With 68 comments, this question was obviously of particular importance to our participants.

#### To which stakeholder group do you (primarily) belong?



n = 187

#### Drawing on your knowledge of the company to date, do you view the Linde share as a promising investment for sustainability/SRI indices and funds?



n = 187

### Carbon Disclosure Project 2007

In 2006, Linde and BOC each took part in the Carbon Disclosure Project (CDP) as separate companies. Following the merger, the companies participated jointly in 2007, as The Linde Group. Over 280 financial service providers joined ranks under the CDP umbrella in 2007, with a fund volume in excess of USD 41 billion. Their investment decisions are based on the Climate Leadership Index – the first global climate protection index, representing the top ten percent of the 500 largest listed companies with an exemplary climate protection concept. Linde is also targeting this index, and has already achieved a listing in the KLD Global Climate 100 Index in 2007. This index, which lists companies whose activities demonstrate the greatest potential for mitigating the causes of climate change, is particularly popular among institutional investors.



### **Afrox on JSE Socially Responsible Investment (SRI) Index**

Since 2004, our African subsidiary Afrox has been listed non-stop in the South African JSE Socially Responsible Investment (SRI) Index. JSE is a privately owned and financed voluntary investors' association, aiming to promote sustainable economic growth in South Africa through selective capital investment.

Only 58 of the 150 largest South African companies have been admitted to this index, following evaluation by JSE according to economic, environmental and social criteria.

### **Australian subsidiary in fifth place on Corporate Responsibility Index (CRI)**

BOC Australia, now fully owned by the Linde Group, achieved fifth place on Australia's Corporate Responsibility Index (CRI) in 2005/2006, behind the Westpac, Toyota, ANZ and BHP Billiton groups. The company will be participating in the rating procedure again this year.

## Stakeholder survey: prerequisites the Linde share must comply with to qualify as a sustainable investment

Target	Recommended action
TRANSPARENCY/ COMMUNICATION	<ul style="list-style-type: none"> <li>→ Provide regular reports on roadmap progress, preferably in line with Global Reporting Initiative (GRI)</li> <li>→ Ensure measurability of activities, identifying value contribution</li> <li>→ Use key performance indicators (KPIs) and have them verified externally</li> <li>→ Report also on difficulties encountered in implementing CR strategy</li> <li>→ Step up social and political communication</li> <li>→ Publish lobbying activities</li> </ul>
ENVIRONMENTAL POLICY	<ul style="list-style-type: none"> <li>→ Follow clearly defined climate-protection programme; publicly commit to the principles of climate protection</li> <li>→ Ensure measurable reduction in CO<sub>2</sub> emissions</li> <li>→ Increase commitment to renewable energy</li> <li>→ Make quantum leaps in production-related environmental protection</li> <li>→ More active stance within the framework of the Kyoto Protocol</li> </ul>
ETHICS	<ul style="list-style-type: none"> <li>→ Appoint an ethics officer</li> <li>→ Extend implementation of the German Corporate Governance Code</li> <li>→ Introduce external monitoring of Code of Conduct</li> <li>→ Incorporate internationally recognised social, environmental and human rights standards into a binding commitment</li> <li>→ Align activities more closely with stakeholder interests</li> </ul>
SUSTAINABLE PRODUCT DEVELOPMENT	<ul style="list-style-type: none"> <li>→ Produce innovative, sustainable products</li> <li>→ Develop product strategy geared towards sustainability</li> <li>→ Ensure that core business is sustainable</li> </ul>
COMPANY CULTURE	<ul style="list-style-type: none"> <li>→ Management must establish a real and true understanding of the challenges and urgency of sustainable development</li> <li>→ Employee communication must ensure that staff are equally committed</li> <li>→ Beyond Group headquarters, individual organisational units must also understand and foster sustainability</li> <li>→ It must be possible to address conflicts and problems</li> </ul>
DIALOGUE	<ul style="list-style-type: none"> <li>→ Establish credible collaborations, e.g. with non-government organisations (NGOs)</li> <li>→ Gather feedback, e.g. from think-tanks</li> <li>→ Establish active contact with socially responsible investing (SRI) ratings agencies and obtain their independent confirmation of commitment</li> <li>→ Ensure proactive involvement of stakeholders</li> </ul>

## Linde comments

- This publication intensifies our reporting activities and shows where we are on the roadmap. During the period under review, we focused on data capture. We also stepped up our lobbying activities. Since May 2007, our public affairs office in Berlin has been bundling and strengthening activities in this area. We are working intensively to define KPIs for sustainability within our new organisational structure.
- Linde already contributes to climate protection in a wide variety of ways. We focus, for example, on optimising both our own production processes and those of our customers, increasing energy efficiency and reducing emissions. We are also making efforts to increase measurability across all areas. This puts us in a better position to avail ourselves of the flexible mechanisms defined under the Kyoto Protocol, such as emissions trading and joint implementation (JI) projects.
- Linde has had a Compliance Officer since 2006, who reports to the Chief Legal Officer. We follow the recommendations of the German Corporate Governance Code in full, and have based the Linde Group Code of Conduct on the International Bill of Human Rights. We will continue to reach out to our stakeholders wherever we are active.
- Our research and development departments are constantly working on innovative, environmentally friendly applications for our gases and technologies. This report provides a comprehensive overview of our activities.
- Continuous communication with all employees worldwide is a key element of our company culture and a fundamental prerequisite for a smooth integration process. And it goes without saying that our communication with employees also covers issues of corporate responsibility.
- Linde maintains regular contact with SRI analysts and will be intensifying this further in 2008. Our survey marks our first direct appeal to stakeholders, and we will continue to actively foster this dialogue in the future.

# Ethics and Compliance

Ethics and compliance represents a values-based approach to business that incorporates statutory and internal corporate regulations. Adhering to sound business principles both within and beyond our core working hours has enabled Linde and BOC to gain their stakeholders' trust. We know that strengthening our reputation considerably increases our value base, and regard this as an ongoing task within the new organisation.

The Linde Group Code of Ethics provides our employees with rules and standards to help them navigate an increasingly complex business world. Linde developed this code in 2007 and launched the Linde Group Integrity Line. In future, we intend to concentrate on establishing structures and additional tools that support compliance with the Code of Ethics. Our objective is to ensure that ethics and compliance is firmly rooted in all areas of company life.

## Recognising uniform rules of conduct

The repercussions for companies that violate the rules and laws that govern business (fair trade or anti-corruption laws, for instance) are increasingly coming under the international spotlight. A variety of penalties can now be imposed, ranging from high monetary fines to prison sentences for offending individuals. Furthermore, the damage to a company's reputation can have a serious negative impact on all areas of business.

Our ability to successfully position ourselves as a leading gases and engineering company that sets standards across the board is therefore closely linked to our ability to minimise these risks. This is why we place so much importance on all employees being familiar with the regulations stated in the Code of Ethics. We believe this is the only way of ensuring a uniform understanding of correct and appropriate business conduct that bridges cultural differences and international boundaries.

## The Code of Ethics – structure, content and application

We have based the structure and content of the Code of Ethics on the standards expected of us by our stakeholders – our customers and suppliers, shareholders, employees and society as a whole. At least one real-life example is used to illustrate each of the approximately twenty ethics topics as clearly as possible (see the following figure). A step-by-step visual aid illustrates how a decision can be reached based on ethical considerations (see figure on the right).

The Code of Ethics applies to all employees of Linde AG and Linde subsidiaries across the globe. This includes all companies in which Linde has at least a 50 percent interest. In cases where Linde's

interest is below 50 percent, we encourage our partners to adopt the standards defined in the Code of Ethics.

**Example // Your team's year end results are ahead of budget. A piece of new equipment is due to be purchased and delivered in early January of the new year. Your plant manager has asked whether the invoice for the equipment can be paid for out of this year's budget. Is this ok?**  
 → The status of your budget is not relevant. Where goods or services have not been received or supplied, the liability must not be recognised.

The Code of Ethics is available on the Internet at [www.linde.com](http://www.linde.com). It can be downloaded as a PDF file and is available in the Group's seven main languages.

## Integrity Line

Linde encourages its employees to initially discuss any issues with their line manager.

The Integrity Line provides employees with an additional channel for addressing legitimate issues. It can also be used by third parties such as customers and suppliers. The Integrity Line falls under our ethics and compliance framework and is described in detail in the Code of Ethics.

The Linde Group Integrity Line can be accessed from a web portal ([www.linde.com/compliance](http://www.linde.com/compliance)) 24 hours a day, seven days a week. It can also be reached via a global Integrity Line phone number as well as by post, e-mail and fax. All issues reported via the Integrity Line are coordinated by the Linde Compliance Facilitator in line with data protection regulations. The Linde Integrity Committee uses a strictly confidential procedure to decide on how each case should be handled (see figure on page 035). The Committee is made up of a representative from Legal, Human Resources, Internal Audit and Corporate Communications. The process is based on the principle of "non-retaliation". In other words, Linde will not tolerate retaliation against individuals who submit reports in good faith. The company also operates a zero-tolerance policy against any wilful, false accusations and may take appropriate disciplinary action in such cases. The Integrity Line and its associated bodies were established in co-operation and agreement with the Group Works Council.

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These symbols should help employees to make the right decision.

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Recognise that you have an ethical issue in the first place.

Are you being asked to do something that you think may be wrong? // Are you aware of potentially illegal or unethical conduct by a colleague, customer or supplier?



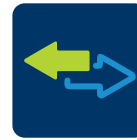
Think before you take action.

Summarise the issue you believe you are facing. Is it clear? // Ask yourself: Why is this a problem? // Consider what your options are. // Review all of the relevant facts and considerations. // Could anyone else be affected? // Ask for guidance from your line manager.



Decide what course of action to take.

Re-read the Code of Ethics. // Are there any legal or monetary considerations? // Assess the risks and how they could be minimised.



Consider the course of action.

Would you be happy explaining what you did to your line manager, colleagues, family and friends without shame or embarrassment? // Would The Linde Group be comfortable if your decision appeared in a newspaper?

As an employee of an international company:

Ask yourself how your decision would be viewed in a global context. Would your decision still be the same?



Proceed:

Communicate your decision and your rationale in an appropriate manner.

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### **Implementation**

The active participation of Linde's 40 top managers and selected employee representatives was crucial in creating the Code of Ethics.

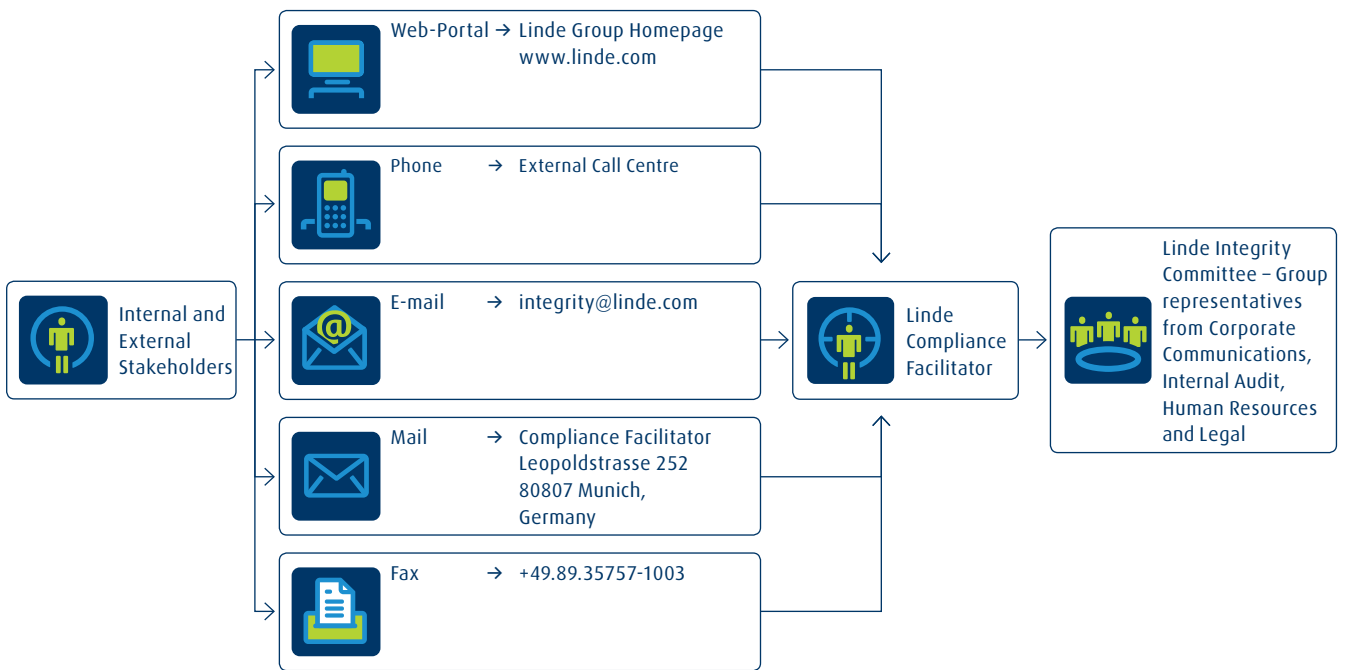
The feedback from these talks was used to optimise the code and define how it could best be implemented. Key issues for top management include communication, the transparent definition of interfaces for ethics queries and compliance as well as the systematic handling of violations.

Building on this initial framework, the next steps involve expanding the Group-wide compliance structure and intensifying our training and education measures. These steps will be monitored by a number of bodies including the Legal department.

### **Ethical purchasing guidelines**

Both Linde and BOC have introduced ethical procurement guidelines in their organisations. These principles continue to be valid, especially for employees who have direct and personal contact with suppliers, contractors and other business partners. In 2008, the guidelines will be merged, revised and implemented throughout the Group as a supplement to the Code of Ethics (see the Corporate Responsibility roadmap, page 018).

Integrity Line



# Corporate Citizenship

Corporate citizenship is an important facet of our identity at Linde. We take great care to ensure that our communal activities underpin the strategic areas we wish to promote – education, science and research. Against this background, we get involved in projects that are closely linked to our core business, and play an active role in the societies where Linde people live and work around the globe. We achieve this by collaborating with numerous scientific institutions and schools, as well as through our foundations, awards and grants. In addition, we actively support individual projects selected for their specific contribution to the local community.

These projects not only embody the traditional values advocated by company founder Carl von Linde, they also reflect our commitment to continuing the majority of social programmes initiated by BOC.

Also under our corporate citizenship umbrella, we are aware of how the at times ground-breaking inventions of Linde have helped to advance society in the course of the Group's 130-year history. These close ties help explain why we are so keen to actively share our corporate heritage with the general public.

## Supporting education, science and research

Reduced investment in education combined with falling birth rates has led to a shortage of urgently needed qualified personnel in Germany. This is characterised above all by an acute lack of engineers. The problem is further compounded by the below average number of third-level graduates in Germany (in comparison with other industrialised countries).

However, the ability to recruit highly qualified engineers is central to our future success. We have implemented a number of measures to actively combat this less than satisfactory situation at all levels of the education system. We have established a number of school sponsorships aimed at raising interest in the natural sciences and support Schloss Hansenberg, a German boarding school for particularly gifted students. We are also actively involved in partnerships with universities, and award prizes and grants to young researchers working in areas of research that are of particular interest to our company.

## Collaboration with third-level education bodies

“For the first of our more major research projects<sup>1</sup> (in the area of temperature changes in gases and vapours), I submitted proposals that were implemented using funds I was able to procure from the Association of German Engineers (Verein deutscher Ingenieure), the German Industry Jubilee Foundation (Jubiläumsstiftung der deutschen Industrie) and our own Society for Linde's Ice Machines (Gesellschaft für Lindes Eismaschinen). In the course of two extensive projects (...), we were not only able to expand our knowledge of physics but also gain key insights into vapour machine technology.”<sup>2</sup>

This is how Carl von Linde described the successful cooperation in 1902 between Linde and the then Royal Polytechnic School of Munich (Königlich Polytechnische Schule in München) in his memoirs. Today, this collaboration would be regarded as a classic public-private partnership.

### Technical University of Munich

The regular lectures held by Linde AG Chief Executive Officer Professor Dr Wolfgang Reitzle in his role as honorary professor provide clear proof of the continued close links between Linde and the Technical University of Munich.

To commemorate the Group's 125<sup>th</sup> anniversary in 2004, Linde helped establish the Carl von Linde Academy by setting up a fund worth over € 8 million. As a central, interdisciplinary scientific body at the Technical University of Munich, the Academy gives young engineers, computer scientists and scientists a grounding in intellectual, cultural and social studies to further their subsequent professional careers. The Academy thus extends the concept of education beyond pure technical knowledge. The Carl von Linde Academy also aims to provide further training for mathematics and science teachers.

Today, the Carl von Linde Academy covers the widest range of topics. In the summer semester of 2007, for example, the institute offered 52 workshops and seven courses running in parallel to the regular semester offering. Each semester, highly qualified Linde engineers and HR managers give hands-on guest lectures at the university. The Academy foundation chair, partly funded by Linde, will be filled in 2008.

→ [www.cvl-a.tum.de](http://www.cvl-a.tum.de)

<sup>1</sup> Research performed at the Laboratory for Technical Physics at the Technical University Munich.

<sup>2</sup> Carl Linde, My Life and Work, 1916. Exact reprint of original works that appeared in 1916, Munich, Oldenbourg Verlag, 1979, page 126 onwards.



### **Friedrich-Alexander University Erlangen-Nuremberg**

In July 2005, Linde also entered into a cooperation with the Friedrich-Alexander University (FAU) Erlangen-Nuremberg. This collaboration focuses on the use of ionic liquids in specific high-tech Linde applications, such as those that leverage hydrogen. Ionic liquids are a new class of substance with unique properties that can be individually designed for different applications. The FAU Chair of Reaction Engineering and Chair of Process Technology and Machinery are involved in this alliance with Linde. Three PhD students, whose work is partly supervised by Linde, are working on this projekt. Linde's financial support and involvement in this project is symbolic of our commitment to training young scientists in high-tech research projects.

→ [www.uni-erlangen.de](http://www.uni-erlangen.de)

### **Technical University of Dresden**

The Technical University of Dresden is an equally important partner university. With roots that go as far back as 1821, to the Technical School of Dresden (Technische Bildungsanstalt Dresden), the Dresden university is one of Germany's oldest technical academic establishments. Saxony's largest university is particularly renowned for its close ties to industry and business, its pragmatic teaching style and its wide-ranging network of partnerships. With its strong background in research, the university plays a key role in educating the engineers of tomorrow that are so crucial to Linde's success.

The flow of knowledge and communication between Linde and Dresden university is particularly intensive in the chemical, gas and pharmaceutical production lines. Our engineers, for instance, regularly hold lectures at the university. The partnership also includes financial support for individual projects as well as joint research and development projects.

→ [www.tu-dresden.de](http://www.tu-dresden.de)

### **Supporting research through the BOC Foundation for the Environment**

BOC's Foundation for the Environment has established varied, valuable contacts to third-level educational institutes throughout Great Britain. The foundation has provided over GBP 200,000 for individual air and water quality projects and hydrogen research at a number of institutions, including the University of Sheffield, the University of Leeds and the University of St. Andrews. In 2008, however, the foundation will cease its activities to make way for a new Group-wide environmental programme.

### **Focus on technical sciences**

Linde is a member of "acatech", the Council for Technical Sciences of the Union of German Academies of Sciences and Humanities. Together with other companies, scientific institutions and outstanding individuals, Linde is involved in promoting the technical sciences as the driving force for future innovations and sustainable growth. acatech's initiatives aimed at encouraging young technical scientists in Germany are of particular interest to Linde.

→ [www.acatech.de](http://www.acatech.de)

### **Collaboration with schools**

Since 2004, Linde has been supporting Schloss Hansenberg, a sixth-form boarding school for exceptionally talented and promising students, which is situated in and owned by the German state of Hesse.

During the period under review, we also intensified our long-term sponsorship links with the two schools Carl-von-Linde-Gymnasium in Kempten and Carl-von-Linde-Realschule in Kulmbach (second-level schools both located in Bavaria, Germany). Both schools joined forces with Linde to participate in the initiative "Jugend denkt Zukunft" (Youth Foresight Germany).

### Schloss Hansenberg boarding school

The Schloss Hansenberg boarding school is currently the only state school that is run as a public-private partnership.

Linde, Dresdner Bank and Altana AG are the three participating companies.

The challenging curriculum aims to help students become well-rounded individuals ready and willing to assume responsibility within society. Educational highlights include a four-week internship abroad, usually completed at the school's partner companies.

To gain admission, students must achieve a minimum grade of 2.0 (corresponds to B). Students accepted after grade nine skip year ten and complete their German Abitur (A-levels) in three years.

The school focuses on mathematics, natural sciences, economics and foreign languages.

→ [www.hansenberg.de](http://www.hansenberg.de)

### Thinking ahead with Linde

In 2006, Linde took part in the national innovation initiative "Jugend denkt Zukunft" (Youth Foresight Germany) organised by the Institute for Organisational Communication (IFOK). The objective of this initiative is to engender interest and enthusiasm for new ideas and create an atmosphere that fosters innovation and technology. As part of this event, twenty students from the Carl-von-Linde Gymnasium spent five days developing innovative ideas on the subject of "Hydrogen – Energy Source of the Future". The students visited Linde's Hydrogen Centre in Lohhof, Germany, spoke with experts from Linde Hydrogen Solutions and, on the final day, presented their joint ideas on the hydrogen economy of the future. Students from the Carl-von-Linde Realschule presented their vision on the subject of "Homecare – The Benefits of Better Care". The initiative proved a big hit among students.

→ [www.jugend-denkt-zukunft.de](http://www.jugend-denkt-zukunft.de)

### Inspiring Gases

Our Inspiring Gases education programme aims to anchor industrial gases in the science syllabus of schools and educational institutions. This programme is built on a basic understanding of the production processes and applications of the most common gases (including oxygen, nitrogen and hydrogen) and was developed by the BOC Group in collaboration with the Royal Society of Chemistry. We will be working with the Institute of Didactics for Chemistry (Institut für Didaktik der Chemie) at the University of Frankfurt am Main to further develop this basic knowledge and provide teachers and staff responsible for creating syllabuses with easier access to information on technical applications and processes. We feel this is a crucial step in the move to giving students a basic understanding of how mass-produced gases are generated, purified, transported and used.

### Further initiatives

As a member of Germany's Wissensfabrik (Knowledge Factory – see page 042), Linde plans to implement the Inspiring Gases programme as an educational project for schools. We also intend to introduce this programme as part of our collaboration with the Schloss Hansenberg boarding school. Linde also supports "Sachen Machen" (Making Things), a national initiative organized by the Association of German Engineers. The companies involved in this project are committed to raising interest in technical careers.

→ [www.wissensfabrik-deutschland.de](http://www.wissensfabrik-deutschland.de)

→ [www.sachen-machen.org](http://www.sachen-machen.org)

## Foundations

The Carl von Linde Foundation at the Technical University of Munich was established in 1932 with the aim of supporting education and research, and helping train young scientists and engineers in Bavaria. The endowment was founded in celebration of Carl von Linde's 90<sup>th</sup> birthday. As Carl von Linde was a professor at the Technical Institute – now the Technical University Munich – the foundation was dedicated to teaching and research activities in his fields of specialisation – thermal and refrigeration theory, technical thermodynamics, freezer technology and thermal research. The foundation has a EUR 360,000 fund at its disposal and is incorporated in the "Stifterverband für die Deutsche Wissenschaft" (association of companies that fund science, research and humanity projects in Germany), see page 042.

The Dr. Friedrich Linde Foundation was established in 1940 to mark the 70<sup>th</sup> birthday of Dr Friedrich Linde, Carl von Linde's son and the then chairman of the Linde AG Executive Board. The foundation provides study grants to talented young employees and their offspring. Although this support is primarily intended for those looking to study technical subjects related to our company, the foundation also provides support for business programmes. The education trust amounts to EUR 310,000.

## Driving healthcare innovation

In our Healthcare segment, research activities primarily focus on the medical applications of gases and the development of medical devices for the treatment of chronic respiratory problems. For more than 15 years, Linde has been supporting research bodies in their quest to find new uses for medical gases. In the past, our activities were mainly concentrated in Scandinavia. The foundation of the GEMI Fund in Autumn, 2003, however, has seen us expand our support to other countries.

### GEMI Fund

Together with Harvard Medical International, a non-profit subsidiary of the Harvard Medical School, and the Swedish Karolinska Institute, one of Europe's leading medical universities, we donate one million US dollars every two years from the GEMI Fund (GEMI = Gas-Enabled Medical Innovations). This money is used to support innovative research into the clinical applications of gases for the treatment, prevention and diagnosis of diseases.

The grant is divided between five to ten research projects worldwide. Participating researchers and institutes are free to decide how the research results are used.

→ [www.gemifund.org](http://www.gemifund.org)

### Inspire Award

Established in 2006, the Inspire Award was created by BOC Medical primarily to encourage empirical research into the clinical applications of gases.

Linde will continue to award grants up to twice a year, depending on the number and quality of the research projects submitted. The Inspire Award is an unconditional grant that does not oblige recipients to provide any services for our company.

## Donations and sponsoring activities

We have introduced Group-wide guidelines to help improve the planning and implementation of our donation and sponsoring activities. The projects and initiatives that we financially support should align with our core brand values, address our main target groups and align with our Corporate Responsibility policy.

These guidelines will enable us to distribute and channel available funds to optimum effect, allowing us to engage with our stakeholders through cultural projects, for example, or fund initiatives of particular merit.

## Corporate Heritage – a chronicle of our history

Linde's unique corporate culture is strongly anchored in our history. We consciously leverage our corporate heritage and the forces that have driven our company over the years to shape our future.

Linde and BOC are a case in point. Having worked closely together in the past, both companies have now joined forces to become the worldwide market leader in industrial gases.

Our central Corporate Heritage office chronicles the Group's historical legacy, informs the public about key events within the context of the relevant socio-political background, and highlights trends that have developed throughout the years.

To better communicate our corporate heritage, we are currently working on a central, historical archive in the German town of Pülach, near Munich. Historical files, photographs, films, digital data carriers and physical objects are being systematically archived. This electronic archive will give visitors a detailed picture of our entire corporate heritage.

To highlight the contribution industrial gases have made – and will continue to make – to the evolution of modern economies, we have launched a research project this year with the University of Glasgow in Scotland and the Gesellschaft für Unternehmensgeschichte (Society for Corporate Heritage or GUG) in Frankfurt, Germany. Over the coming years, a team of scientists, headed by American business historian Ray Stokes, will examine sources and materials from around the world and interview the most influential corporations in the industry. As part of its support for the project, Linde is funding a PhD studentship at the University of Glasgow.

Further information is available on our website at

→ [www.linde.com](http://www.linde.com)

Linde's role in driving tomorrow's technological innovations comes with a special sense of responsibility to also inform the public about emerging technologies and their implications. After all, new technologies must be generally accepted and welcomed by society as a whole in order to be effective. As a result, we have created the Linde Knowledge Library (Linde-Wissensbibliothek) together with Professor Ulrich Wengenroth, Head of Munich Centre for the History of Science and Technology (Münchner Zentrum für Wissenschafts- und Technikgeschichte), who will act as publisher. The first volume in this series details the multi-faceted history of the liquefaction of natural gas and its potential for future use. It is already available and is the first international publication that investigates the evolution of this future technology. A further volume focusing on hydrogen as a source of energy is currently being prepared and will be published as part of the Linde Knowledge Library in 2008.

## Participation in associations and alliances

Linde is in open, regular communication with a wide range of bodies and audiences, including national, European and international industry and trade associations and non-government organisations. We regard these groups as some of the company's most important stakeholders.

New participation opportunities for the Group are decided on at Group headquarters in Munich and ratified by the Executive Board or the Corporate Responsibility Council. Regional Business Unit management establishes ties with local associations or organisations, and is responsible for maintaining contact.

## Examples of participation in international organisations

### UN Global Compact

Linde has been a member of the UN Global Compact since 2005. The UN Global Compact is a global alliance of organisations and private businesses which aims to protect human rights, support compliance with labour standards, encourage environmental responsibility and combat corruption. Linde supports these aims and views the Global Compact as a powerful vehicle to effect change by bringing government, companies and civil society organisations to the table. The Global Compact is the largest network of responsible corporations in the world, with over 2,000 members.

Linde is active in the German Global Compact working groups, and in July 2007 joined around 150 other large international corporations in signing the Global Compact statement on climate protection ("Caring for Climate: The Business Leadership Platform", [www.globalcompact.org](http://www.globalcompact.org)).

In the interest of documenting our progress in implementing the ten principles of the Global Compact (see breakout box page 042), the "Communication on Progress" report is a central part of our Corporate Responsibility report (see Index, page 136).

### EIGA

Linde Gas and many of its national subsidiaries are committed members of the regional and national associations representing the gas industry. Our objective is to help establish the highest possible safety and environmental standards among member organisations – in production, transport, storage, and industrial and medical gas applications. While respecting anti-trust laws, these associations allow us to exchange experiences and create Codes of Best Practice (see glossary), as well as training materials. We have also developed common position statements, which are incorporated in international standards. In addition, the associations actively advise legislators when new laws and regulations are being drafted and devise solutions to ensure compliance with these laws.

Linde is a member of various associations, including EIGA (European Industrial Gases Association) and CGA (Compressed Gases Association U.S.A.). Dr Aldo Belloni, a member of the Linde AG Executive Board, is the current EIGA President.

### Responsible Care

The international Responsible Care programme is a worldwide initiative sponsored by the chemical industry. Irrespective of legal requirements, its aim is to continuously improve protection for health and the environment, and to maximise safety for workers. As a member of the German Chemical Industry Association (VCI), Linde Gas Germany joined Responsible Care in the year 2000. Other national subsidiaries have since followed suit.

## Participation on a national level

### Business in the Community

Business in the Community (BiTC) was founded in Great Britain in 1982 by leaders in the business community, with the aim of taking targeted action to combat social inequalities. In 1985, the Prince of Wales became the patron of BiTC and takes an active interest in the organisation to this day.

### The ten principles of the UN Global Compact

**Human Rights** // Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights; and Principle 2: make sure they are not complicit in human rights abuses.

**Labour Standards** // Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining; Principle 4: the elimination of all forms of forced and compulsory labour; Principle 5: the effective abolition of child labour; and Principle 6: the elimination of discrimination in respect of employment and occupation.

**Environment** // Principle 7: Businesses should support a precautionary approach to environmental challenges; Principle 8: undertake initiatives to promote greater environmental responsibility; and Principle 9: encourage the development and diffusion of environmentally friendly technologies.

**Anti-Corruption** // Principle 10: Businesses should work against corruption in all forms, including extortion and bribery.

BiTC annually evaluates the social and ecological responsibility of its members. The BOC Group participates regularly and voluntarily in this evaluation and consistently ranks among the top 30 percent of approximately 150 evaluated businesses.

Our continuing participation is currently being examined by the UK & Ireland Regional Business Unit.

#### econsense

Linde has been a member of the Forum for Sustainable Development of German Business, *econsense*, since 2007. As part of its involvement, Linde has integrated the *econsense* principles of sustainable development in its corporate strategy, and we contribute to the implementation of these principles, for example through our technological innovations. Dialogue with other *econsense* member companies is very valuable in achieving the *econsense* goals.

#### Association of companies that fund science, research and humanity projects in Germany (Stifterverband für die Deutsche Wissenschaft)

For many years, Linde has been a member of this association, and organised the Carl von Linde grant under its umbrella (see page 039). In 2007, the Chief Executive Officer of Linde AG, Professor Dr Wolfgang Reitzle, was appointed President of the association.

#### “Knowledge Factory” (Wissensfabrik)

The “Knowledge Factory” is an association of leading German companies and experts working together to strengthen the German economy. It is an open platform for companies, educational establishments and initiatives looking to promote and share knowledge as the key to economic growth.

The Linde Group joined “Wissensfabrik – Unternehmen für Deutschland e.V.” (Knowledge Factory – Companies Working for Germany) in January 2007 and will actively support this initiative with various community projects (see page 038).

## Awards

Linde received numerous awards during the period under review. Many of these were due to our successful management of the BOC Group acquisition, although there was certainly no shortage of awards for our innovative products and achievements in safety and environmental management.

### Management and communication

In October 2006, Professor Dr Wolfgang Reitzle, President and Chief Executive Officer of Linde AG, was named "Manager of the Year" by two renowned German business magazines. Reitzle was awarded this title in acknowledgement of the successful merger between Linde and BOC. In September of this year, Reitzle and Dr Harry Roegner, Head of Corporate Communications & Investor Relations, received the "German Image Award 2007" for outstanding reputation management.

### Linde receives the "Corporate Borrower of the Year" award

The internationally acclaimed English business publication International Financing Review named Linde its Corporate Borrower of the Year in January 2007 for the innovative financing strategy that enabled the company to acquire the BOC Group.

### "Rudolph Erren Award" for Wolfgang Reitzle

During the 16<sup>th</sup> World Hydrogen Conference in Lyon, France, Professor Dr Wolfgang Reitzle was presented the Rudolph Erren Award by the International Association for Hydrogen Energy (IAHE). Named after German engineer Rudolph Erren, the prize is awarded every two years for outstanding contributions to the advancement of future-proof hydrogen technologies (see also page 065).

### Linde Hydrogen Centre named one of 365 "Landmarks" in the "Land of Ideas"

At the beginning of 2007, Linde's Hydrogen Centre in Lohhof near Munich was chosen as a landmark site by the organisation "Germany – Land of Ideas". With German President Horst Köhler as patron, this initiative is a coalition between the German government, trade and industry.

Linde's Hydrogen Centre combines a hydrogen fuelling station with a technology test centre, training centre and a presentation platform. It was officially named one of the 365 landmarks in the "Land of Ideas" on 21 February 2007.

### Safety and environmental protection

Each year, the US Compressed Gases Association (CGA, see page 093) presents awards for outstanding achievements in the areas of safety and environmental protection.

In April 2006, our gases subsidiary in the USA received the Environmental Excellence and Fleet Safety awards from the CGA. This is the second year in a row that the US gases company has received the Environmental Excellence award, which was given for the particularly environmentally sound small gas cylinders developed in the USA.

In November 2006, Linde's Indonesian subsidiary was named "The Most Caring Company 2006" in the category "Basic and Chemical Industry". In Indonesia, this title is conferred on companies that place great importance on stakeholder safety and implement the appropriate management systems.

### Award for Linde Medical Devices GmbH

In December 2006, Linde Medical Devices GmbH, a subsidiary of The Linde Group, received an award from the "Stiftung Innovation" foundation for a particularly useful and innovative product – the mobile "Oxy-Gen Lite®" solution. This oxygen generator improves the quality of life for patients with chronic respiratory diseases as it is considerably lighter, quieter, more compact and efficient than any of its predecessors.

# Employees

The long-term success of our company is built on the talent and dedication of our employees. Our far-reaching, Group-wide human resources strategy focuses on advancing and motivating staff, maintaining their loyalty in the face of stiff competition from other companies, and sparking potential candidates' interest in working for a global technology player such as Linde.

This strategy is a powerful incentive tool that reflects our business dynamics and provides an extremely flexible framework.

Alongside equal opportunities, which are hardwired into our values, ongoing employee training is one of the cornerstones of our HR policy at all our locations. Our role as a responsible employer also includes offering our staff the greatest possible social security worldwide.

## Merger between Linde and BOC

The acquisition of the BOC Group has had a major impact on our company in every respect during the period under review. The seamless joining and integration of both company cultures enabled us to remain on the path to success in 2007.

Here it was particularly important to ensure that our decision-making and execution capabilities were not compromised at any stage of the integration process. Equally important was the need to avoid any feelings of uncertainty among our staff. We achieved this through regular, transparent employee communication, focusing above all on the strategic importance of our merger.

We have made every effort to convey both the opportunities and risks as fairly as possible to our employees to bolster one of our most valuable assets – the loyalty and motivation of our staff across the globe. Severance agreements with redundancy payments and an internal reorientation centre were key elements of our social plan, defined by the Executive Board and Works Council under a works agreement.

The sale of our forklift division, the KION Group, to a consortium of financial investors at the end of 2006 was tied to the condition that they would continue to honour all agreements on safeguarding locations made by the Linde Executive Board with employee representatives in Summer 2005.

## Meeting our HR challenges

The acquisition of BOC by Linde has posed particular challenges for Group-wide human resources management. Our HR department has implemented a number of measures to support and facilitate the integration process.

The central focus has been on developing and implementing our new organisational structure. One important aspect involved establishing a standardised, worldwide staff selection and appointment process, designed to be fair, transparent and internationally consistent. The umbrella concept was simple – find the most suitable candidate for each position, while at the same time maintaining a balance between management personnel from both former organisations. We kicked off this process when the merger was closed in September 2006, starting with the most senior executives and working our way down through the new organisation during 2007.

We are now working on harmonising the role evaluation and remuneration systems of the two companies and consolidating the Linde and BOC executive development programmes.

## Values and guidelines

We expect our employees at all levels to adhere to our high ethical standards, as set out in the Linde Group Code of Ethics (see page 032). Our common goal of becoming an exemplary organisation across the board calls on each and every employee to demonstrate the highest levels of integrity, always treat others with respect, and behave responsibly at all times.

During an integration process, it is particularly important to develop a shared set of values and common working culture. Our activities in this area are progressing well, and will be concluded by the end of financial year 2007.

To establish the new company culture and reformulate The Linde Group's vision, values and guiding principles, the Executive Board recommended surveying employees throughout the Group. The Group's top 250 executives began the process, which was then continued on a global scale by 350 representatives from all business areas and intensified by cultural workshops. The results gave rise to the "Linde Spirit", which is the defining force for our company culture (see page 012).



## Group-wide HR development

We pursue an end-to-end HR development concept, tailored to the requirements of its various target groups. The cornerstones of our HR strategy are professional recruitment of specialised and managerial staff, training for junior employees based on Group-wide succession planning, and systematic professional development at all levels. The Group headquarters in Munich is responsible for global HR management.

### Recruitment and training

To continue attracting highly qualified employees in the years to come, especially in the fields of engineering and natural sciences, we intend to continue expanding our higher-education marketing activities.

In Germany, we maintain valuable links with the technical universities of Erlangen-Nürnberg, Dresden and Munich, for instance, as well as with various vocational institutes. All the key national and international Linde AG companies also collaborate closely with institutes of higher education in their vicinities.

As part of its training activities, Linde offers dual study programmes in Germany as an alternative to traditional higher-education courses. These combine practical training with studies at a vocational institute or state academy. To interest potential specialised and managerial staff early on, we have for many years now been assigning thesis projects to exceptionally talented students in fields that match our core business areas.

### Evaluating positions and identifying potential

Describing the nature and significance of specific roles based on uniform standards is essential to give employees a transparent overview and allow us to compare positions within the Group. High up the scale are not only roles involving a high degree of leadership responsibility, but also those demanding particularly specialised expertise.

We are continuing to focus on standardising the management systems for our potentials used by Linde and BOC. These involve systematically weighting and classifying individual positions by their significance for the organisation.

## Continuing professional development

To enable ongoing education for all our employees, we are continually enhancing the range of specialised and interdisciplinary training courses offered across the Group. The emphasis here is on target-directed skill building. This includes safety training, courses for plant operating staff, courses for field staff at Linde Gas Therapeutics and IT and language skills. These measures also help ensure the long-term employability of our staff.

### Linde University

Linde has bundled its leadership development and talent management offerings under the umbrella of Linde University. In cooperation with leading international business schools, Linde University offers tools and programmes both for the Group as a whole and for individual business areas. The aim is to promote strategic management skills among our Group executives, support international networking and foster a uniform performance culture.

At Group level, we offer three programmes for high potentials at various levels of the hierarchy – the Global Leadership Programme (senior executives), Global Leadership Development Circle (upper management) and Global Talent Circle (future leaders).

All our programmes are supported by international professors and high-ranking Linde employees. They foster the transfer of management know-how and focus on projects of direct relevance to our business. These projects are supervised by the Executive Board and senior executives. The results are then gradually channelled into the processes of individual business areas.

This Group-wide programme is complemented by targeted offerings from the individual business areas, specifically tailored to their own requirements. We also offer all employees a wide range of personal development opportunities within The Linde Group. These include training for international project management, job rotation programmes and individual coaching.

For customer service, a broad portfolio of targeted training courses arms our employees with the necessary knowledge not only to maintain our current high standards, but also to keep raising the bar. We particularly focus on safety-related topics here.

#### **Succession planning and knowledge management**

To foster career development within The Linde Group and fill vacancies with internal high achievers, we are continuing to work intensively on our succession planning strategy for all key positions in the Group. Here we follow uniform standards and criteria world-wide.

Our company's know-how is a valuable asset and yields the greatest benefits when made available to all employees able to make productive use of it. We therefore empower all hierarchical levels with access to relevant information.

Each of our business areas maintains intranet-based knowledge databases with comprehensive information on the market and our competitors.

We also promote the informal exchange of knowledge through the ongoing training opportunities provided by Linde University. By strategically interfacing our various business areas, we facilitate dialogue between them and encourage the exchange of best-practice solutions.

#### **Cooperation and communication**

Open, trust-based corporate communication is a key ingredient in employee satisfaction. At Linde, our dialogue is ongoing and transcends hierarchical barriers. Many of our national affiliates already conduct employee surveys, and the results provide valuable pointers for enhancing cooperation between staff and management.

To measure the success of our wide range of integration measures, for example, we twice surveyed a group of around 3,000 randomly selected employees during the reporting period, asking their opinions on the integration process. The results here were clearly positive overall, and we are currently developing appropriate measures for the individual areas where improvement potential was identified. We will be conducting this survey again in 2008, enabling further evaluation of our integration progress.

#### **Internal media**

We have a variety of tools in place for prompt, detailed communication of organisational changes and key events. We expanded these media when we merged with BOC. All employees world-wide can obtain current information at all times from the Linde Group intranet. We also send a monthly electronic newsletter to all employees, providing a handy overview of the most important news from every area of the company. Those without access to electronic media receive information on current Group developments from their superiors or via written notices. "The Linde Group World Magazine" is available to all employees and is issued regularly in several languages throughout the Group.

#### **Diversity**

We respect and place great value on diversity. Differences between individuals enrich our joint collaboration and company culture. Our Code of Ethics (see page 032) is valid across the Group and guarantees equal opportunities for our employees to the greatest extent possible.

The Linde Group attaches great importance to retaining the local workforce in the various countries in which we operate. We also enhance intercultural competence by strategically seconding employees to foreign locations.

Since the proportion of women in engineering and science-based work environments such as ours remains disproportionately low, we are taking measures to make Linde a more attractive employer in this respect and actively welcome suitable female applicants.

In Germany, for example, our Engineering Division is actively involved in the Technical University of Munich's MentorING programme for female science and technology students. Here, mentors drawn from companies and the university provide support for young women from their intermediate examinations through to graduation.

Our long-term goal is to significantly increase the proportion of female employees in our workforce in general, and among senior management in particular, by implementing appropriate measures. In the first quarter of 2007, around 8.3 percent of our senior executive positions were staffed by women.

### Work-life balance

Linde supports a work-life balance that enables employees to achieve both private and professional goals without being overburdened. Making our company more family-friendly is therefore an integral part of our corporate HR policy, and we are already seeing the first fruits of our activities in this area. Since 1 January 2007, Linde's German subsidiaries have offered a childcare placement service to all their staff, for instance. The employees continue to pay for the childcare themselves, but Linde covers the allocation costs.

### Employee representation

The Linde Group respects the right of its employees to unionise. The company consistently strives for constructive cooperation with its employees, representatives and unions with a view to achieving lasting consensus. Our aim here is a fair balance between Linde's business interests and the interests of our workforce.

In Germany, the Works Constitution Act (BetrVG) regulates co-operation between company management and employee representatives. Employee representation at The Linde Group is two-tiered, consisting of decentralised works councils in the individual units and a central works council for the Group as a whole.

In addition to this dual co-determination system, Linde has for some years maintained a European Works Council. This provides a platform for communication between employee representatives across national borders and functions as an advisory body for both the Group Works Council and corporate management.

### Pension plans

Company pension plans are becoming increasingly important to our employees. The Linde deferred compensation plan, in particular, is growing in popularity with our staff as a tax-deductible method of improving their pension prospects. Here the company invests employee salary contributions in a dedicated fund and guarantees a minimum interest rate on investments.

Linde offers over sixty pension plans worldwide, operated as either defined contribution or defined benefit plans (see glossary).

In financial year 2006, Linde's expenditure on pensions and support totalled € 165 million (previous year: € 123 million). Of this, Germany accounted for € 61 million (previous year: € 71 million).

Alongside the deferred compensation plan, Linde also provides employer-financed pension benefits in the form of contribution-based modular schemes.

BOC also placed great importance on pensions, offering programmes tailored to local conditions for employees throughout the company.

Linde has decided to continue the former BOC pension plans unchanged. With pension obligations of around € 3 billion, the English pension plan is the largest single performance-related pension plan in The Linde Group. Major BOC pension plans are also established in the USA, Australia and South Africa. More detailed information on this is available in our Annual Report.

### Corporate healthcare

Through our corporate health insurance service (BKK Linde) and local company doctors, we offer comprehensive preventative health programmes to our employees and their co-insured dependants at numerous locations. These include screening for colorectal and breast cancer, and back exercise courses, for example. In addition, all employees – including those who take few or no business trips – are regularly offered vaccinations against infectious diseases.

When restructuring the company health insurance service at the beginning of February 2007, we decided to change our policy and open it to non-employees. This means that, in Germany, state-insured individuals outside The Linde Group may apply for membership of BKK in future.

The number of members currently insured by BKK has only changed slightly in comparison with the previous year. At 31 December 2006, BKK reported 26,149 members (previous year: 26,109) and 12,279 family members (previous year: 12,604).

# Safety, Health, Environment, Quality (SHEQ)

Effective management of issues surrounding safety, health, environment and quality (SHEQ) is of key importance to all our stakeholders, but particularly to our customers and employees.

Behaving responsibly towards other people and our environment is crucial to sustaining the high quality of our products and services, and – by extension – to the long-term success of our business.

As part of our merger with BOC, we sharpened our focus on safety and environmental protection and integrated SHEQ as a central mission in our new organisational structure. The individual business unit chapters provide numerous concrete examples that clearly demonstrate the high priority accorded to SHEQ at Linde.

## Firm roots

Linde has a dedicated SHEQ department that manages all SHEQ issues across the Group. This department is responsible for setting global Group targets, which the organisational units must then implement autonomously, deploying measures appropriate to the individual goals (see graphic, page 049).

## Consistent vision and policy

In December 2006, The Linde Group Executive Board committed a company-wide SHEQ policy. This applies to all employees of The Linde Group, has been translated into around 30 languages and systematically cascaded across the entire organisation through workshops and presentations.

The conduct guidelines set out in our SHEQ Policy fully align with our core principle: "At The Linde Group, we do not want to harm people or the environment."

Our SHEQ Policy extends far beyond a call for compliance with legal regulations. It is a voluntary undertaking inspired by the desire to actively live out our sense of Corporate Responsibility and an essential prerequisite for our international market success. It is published on our website at [www.linde.com](http://www.linde.com). The SHEQ managers in our divisions and Regional Business Units (RBUs) are responsible for communicating this policy and taking appropriate measures to implement it. It is important to us that good conduct in accordance with the SHEQ policy receives appropriate recognition and that our managers, in particular, set a strong example under our visible leadership strategy. Linde SHEQ business heads hold awareness-raising workshops targeted specifically at management across the entire Group.

We also require a responsible approach towards people and the environment from our business partners.

We have developed our own logo as an easily recognisable symbol for all SHEQ-related matters (see graphic, page 049). This is designed both for internal and external communication.

## SHEQ management system

Our SHEQ policy is a set of guidelines designed to ensure continuous improvement of environmental protection, occupational health, safety and product quality standards across the globe.

We are in the process of rolling out an integrated SHEQ management system worldwide, clearly defining the most important goals and standards in these areas. This also allows us to ensure maximum safety in handling gases and operating supply facilities. We are currently harmonising all BOC and Linde standards and consolidating them under the Linde Integrated Management System and Standards (LiMSS).

There are many advantages to systematically integrating SHEQ in all our operations and workflows. It significantly reduces occupational accident and sickness rates.

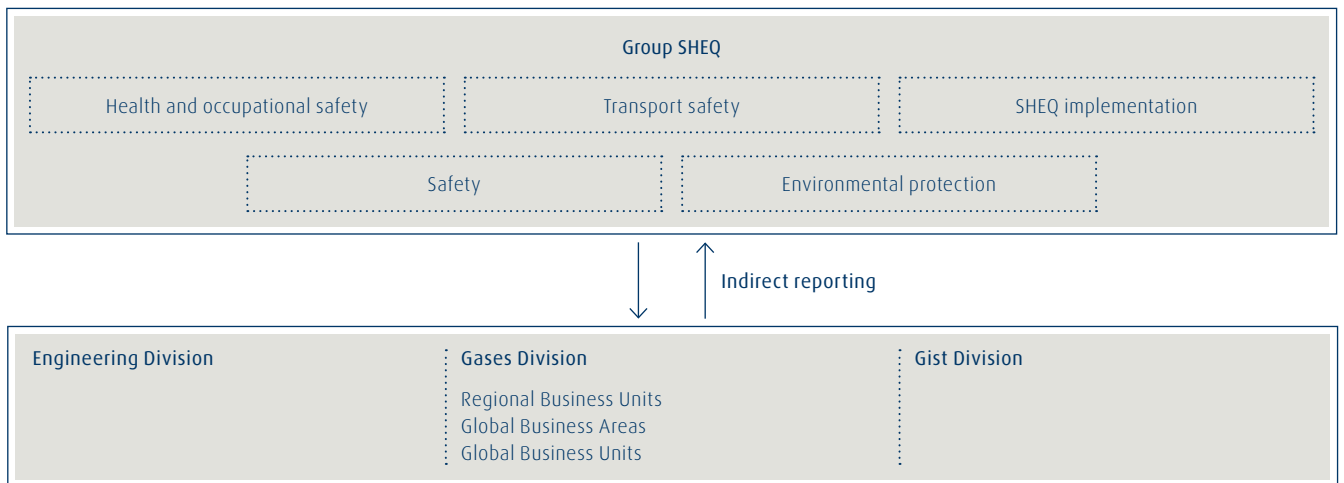
Our systematic SHEQ management approach makes a substantial contribution to limiting risks to all employees, partners and customers, as well as to our natural surroundings. To increase awareness of SHEQ and ensure the management system is implemented properly in the long term, we are conducting intensive training for our own and partner employees at all Linde locations worldwide.

## Environmental protection and safety laws

Measures to improve environmental protection are increasingly being incorporated in national legislation, for instance to meet emission-reduction targets or decrease waste levels. Plant safety is another important consideration here.



Safety, Health, Environment, Quality (SHEQ) organisation



Many of these laws have now been standardised at EU level, but national distinctions remain both within the EU and especially outside it, and must, of course, be observed.

Our regional subsidiaries and their managers are therefore responsible for implementing our SHEQ management system autonomously.

**Product stewardship**

Product stewardship is an holistic approach to product responsibility. It involves identifying and evaluating the possible hazards and risks that may stem from a product throughout all stages of its life cycle – from research and development through manufacture, storage, transport, retail and usage to recycling or disposal. The risk potential is assessed in relation to employees, neighbours, customers and the environment. The aim is then to avoid or reduce these risks as far as possible.

**Procurement**

At Linde, product responsibility begins as soon as we purchase raw materials and supplies. Our central purchasing organisation selects suppliers that are committed to the principles of SHEQ. At the top of the supplier selection criteria for our Gases Division, for example, is a documented quality system.

**Environmental protection and production safety**

An important goal of our SHEQ policy is the conservation of natural resources, for instance by cutting water and energy consumption, reducing emissions and decreasing waste levels.

Our SHEQ managers worldwide record the impact of each individual location on the local environment. Particularly at certified locations, the environmental effects of each process step are analysed and we then define measures to reduce potential impact to a minimum. We also extend successful optimisation programmes to other locations in best-practice projects.

The processes in our Gases Division with the highest environmental footprint are acetylene production and filling, gas manufacture using air separation and other methods, maintenance and transport of cylinder gases, and tank transportation.

To ensure the safety of our production processes, we take a proactive stance and apply particularly stringent safety guidelines to high-risk processes and to all gas manufacturing, handling and storing processes. To achieve our zero-accident goal, we re-launched our Major Hazard Review Programme in 2007, combining the best features from legacy processes. Under the umbrella of our process risk management activities, this helps us promptly identify potential risks that could result in damage to people, property or the environment, and introduce appropriate safety and inspection measures.

**Customer service: emergency assistance and gas disposal**

As competent and responsible partners, Linde gas experts are ideally equipped to provide initial support in emergencies involving cylinder gases. This type of situation might arise if gas cylinders in critical condition need to be retrieved after a fire, for example, or if a gas leak cannot be stopped. Our emergency assistance protects people, property and the environment.

**REACH**

REACH stands for Registration, Evaluation and Authorisation of Chemicals, and is an EU directive passed in December 2006 to reform European chemicals legislation. It came into force on 1 June 2007.

It stipulates that within the EU, the health and environmental impact of chemical substances must be tested and registered from an annual production or import volume of one tonne. This also includes substances already on the European market.

Argon, nitrogen and carbon dioxide are exempt from REACH, since ample information is available for these gases and they have been evaluated as posing a negligible risk.

Similarly, REACH does not apply to certain substances that do not fall within the scope of registration and whose exemption does not affect the aims of this legislation. These include oxygen, hydrogen, nitrogen, the noble gases helium, neon and xenon, natural gas and liquefied gases, e. g. LNG. Other exceptions include medical gases and gases used as food additives.

**Safety datasheets**

REACH has altered various aspects of the content and structure of safety datasheets prepared in accordance with previous regulations. However, no transition period has yet been announced for the provisions concerning these data sheets.

Linde therefore intends to proceed in accordance with the recommendations from the European Industrial Gases Association (EIGA) and European Chemical Industry Council (CEFIC) and adapt the datasheets gradually.

We do not feel it is necessary to amend existing safety datasheets solely on account of the formal changes prescribed under REACH. So existing sheets that comply with current regulations may still be distributed to new and established customers even following 1 June 2007.

**Crisis management and communication**

Even the best informative and preventative measures cannot guarantee one-hundred-percent safety or avoid all errors. And even using the most reliable risk management system, a degree of residual risk always remains.

It is therefore essential that responsibilities are clearly defined in the event of accident or serious malfunction. If such incidents are attributable to infringements of applicable legal requirements, the company may face sanctions or compensation claims.

At The Linde Group, the Executive Board leads the formulation of central crisis management processes. The Board is supported by the central SHEQ department, the relevant division and RBU managers who regularly exchange information regarding key risks.

Apart from this, the Gases, Engineering and Gist Divisions are responsible for their own compliance with the relevant laws as well as for meeting company-specific provisions that extend beyond the legal framework.

**Environmental protection and safety in the Engineering Division**

Health, safety, environmental protection (HSE) as well as quality (Q) are critical factors for our Engineering Division in planning and executing projects all over the world. To meet the high demands and expectations here, we have established an integrated HSE & Q management system aligned with internationally recognised standards such as DIN ISO 14001, DIN ISO 9001 and OHSAS 18001.

To ensure plant construction and operation without accidents, damage to people or the environment, or financial loss, we attach the utmost importance to the prevention and avoidance of defects within a continuous improvement process.

### Integrated plant planning

Every plant we build is unique. And for this reason, our experts face major challenges in evaluating requirements for environmental protection and safety each time we build a new plant. Despite the individual and sometimes major differences between plants in terms of dimensions, site conditions and risk potential, it is essential to ensure a systematic procedure that covers every step from planning all the way to turnkey handover. To achieve this, we follow a pre-defined process model.

The Engineering Division has set out the basic structure of its HSE & Q management system in a handbook, updated annually. The HSE & Q planning concept is based on this and applied to every project, ensuring consistently high standards across the different projects and plants. This planning concept reflects the Engineering Division's core requirements, legal regulations and codes, official obligations and customer demands. It operates on three levels:

1. Avoiding or reducing potential risks and their impact on people and the environment
2. Preventing incidents
3. Limiting the effects of incidents, e.g. by implementing safeguards

### Autonomous safety department for plant planning

Our Engineering Division has established a specialist department for safety, environmental protection and approval procedures as an integral part of project execution. The experts there work closely with our customers right from the early planning stages, incorporating the latest legislation on safety technologies and ensuring a maximum of environmental protection without compromising cost-effectiveness.

Thanks to its global reach, this team draws on comprehensive expertise. Its know-how covers all engineering steps, extending, for example, from systematic risk analyses and noise studies to concrete noise-reduction measures and safety specifications covering everything from safety valves and fire-protection installations to complete flare units. Our team has in-depth experience in all engineering and process technologies involved in all plants constructed by Linde. We are one of the only companies in the world that has an autonomous safety department for plant engineering.

### Safety, health and environmental protection on international engineering construction sites

The HSE & Q handbook guidelines stipulate that the safety, environmental and quality measures for all employees involved in the engineering, construction and commissioning as well as for all third parties not directly involved must be incorporated and implemented early on in the project design and planning stages. The project manager generates a requirements profile for safety, health and environmental protection (SHE) on the engineering site as part of plant planning.

### Procurement in the Engineering Division

As a global force in plant engineering, we constantly work to optimise our procurement processes for components, materials and services. Due to the differing conditions between plants, our order processing is based on both general and project-specific guidelines and purchase requirements.

However, we also follow clear procurement guidelines that are valid across the Engineering Division. We only use service providers and suppliers equipped with appropriate references, a good reputation, a high degree of integrity and impeccable creditworthiness. They must be able to demonstrate an internationally recognised quality management system to our purchasers, and it must also take account of environmental protection and safety. We perform comprehensive assessments to select our suppliers and maintain lists of approved partners for all goods and services to be procured. All our procurement policy guidelines are set out in the Engineering Division's HSE & Q management handbook.

# Environmental and climate protection

Combating the effects of climate change is one of the biggest global challenges for the coming decades. And the dwindling reserves of drinking water in many parts of the world – also exacerbated by climate change – is a problem that urgently needs resolving.

Linde views climate change as one of the developments set to influence the future of our society. We analyse and evaluate its consequences in terms of both opportunities and risks. Our future financial goals will be even more closely linked to our technological and environmental innovations, driving us to put our wide-ranging development potential to even more effective use on the climate and environmental front. This also reflects our stakeholders' recommendation to make climate protection a high priority (see page 030).

## Our principles

Linde is firmly committed to protecting the environment, offering safe, eco-friendly goods and services and pursuing research and development into particularly sustainable products, services and technologies.

We regularly measure and evaluate company processes that have an impact on the environment and climate, and publish the results.

Environmental protection – which for us includes combating climate change – is a key consideration in all our business operations.

Every Linde employee shares responsibility for protecting the environment and climate in their daily activities.

These principles are anchored in our Corporate Responsibility and SHEQ policies (see page 016 and [www.linde.com](http://www.linde.com)).

As far as possible, we analyse the environmental impact of our products and services throughout the entire extended life cycle, from manufacturing to application.

## Emissions scorecard

In accordance with our SHEQ policy, we continually monitor our data relating to the environment and climate. Our aim is to filter all the data we gather to derive key performance indicators (KPIs; see glossary) in the future. This will provide us with an essential measurement and monitoring tool for our environmental performance.

We are aligning our activities here with an international standard – the Greenhouse Gas (GHG) Protocol issued by the World Business Council for Sustainable Development (WBCSD). More information is available in our Facts and Figures section, from page 124.

## EU Emissions Trading Scheme (ETS)

Linde was not required to participate in the first phase of emissions trading. We are considering whether we can implement the Clean Development Mechanism (CDM) and Joint Implementation (JI) projects also recommended as instruments under the Kyoto Protocol.

## Research and development

At Linde, researching and developing hydrogen technology is particularly important in the move to protect against climate change.

We are working intensively on generating green hydrogen from renewable energy sources to enable a one-hundred-percent sustainable energy cycle. Methods of producing green hydrogen include biomass to hydrogen (BTH), using methane gas obtained from biomass fermentation, and thermochemical transformation of suitable biomass.

## Participation in climate protection initiatives

Linde participates in numerous international initiatives and national networks focusing on climate protection. Examples include the UN Global Compact climate protection initiative (see page 041) and the Carbon Disclosure Project (CDP; see page 028).

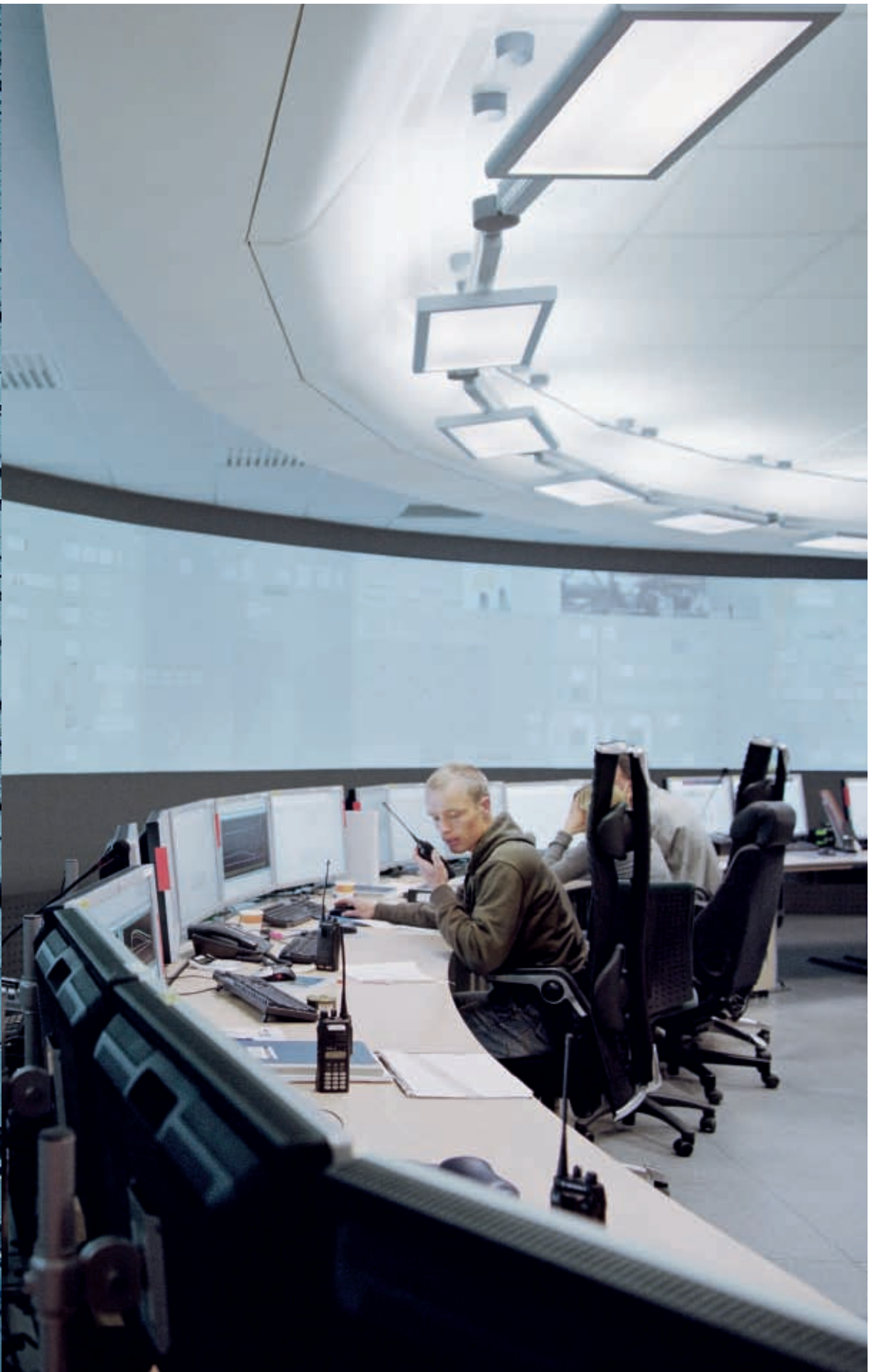


**Life cycle assessment of oxygen** // A good example of our comprehensive life cycle assessment from the Gases Division is our environmental analysis of industrial oxygen. Analysing all the data shows that the use of pure oxygen in combustion processes offers substantial benefits over the use of ambient air. Pure oxygen produces a stronger reaction, so the combustion process requires much less energy. This conserves resources and significantly cuts greenhouse gas emissions, reducing the CO<sub>2</sub> released by up to 24 percent and reducing former nitrogen oxide emissions to trace levels. In contrast with air, the use of pure oxygen also saves up to 15 percent energy over the production chain as a whole.

Examples of resource protection in our production processes			Examples of environmentally friendly products and technologies		
		Page			Page
<b>Engineering Division</b>	Integrating environmental protection in plant planning	051	<b>Engineering Division</b>	CO <sub>2</sub> sequestration	058
<b>Gases Division</b>				Oxy-fuel process	060
Continental & Northern Europe RBU	“Lindeecosostenibile” environmental programme in Italy	068		Green LNG transport	061
	Cutting energy consumption in air separation plants	069		Emissions reduction in ethylene plants	061
	Reducing CO <sub>2</sub> with improved route planning for gas distribution by truck	069	<b>Gases Division</b>		
Eastern Europe & Middle East RBU	Optimising carbon dioxide plants in Turkey	081	Continental & Northern Europe RBU	Climate and environmental protection with hydrogen	066
North America RBU	Environmental award for conversion and modernisation of our air separation plant in City of Industry, California, USA	093		Investigating separation and safe storage of CO <sub>2</sub>	067
	Use of environmentally friendly coolants in air separation plants	094		CO <sub>2</sub> recycling	068
South & East Asia RBU	Efficiency projects for plants and facilities	107		Eco-friendly textile cleaning	068
Greater China RBU	Promoting corporate environmental protection	112	UK & Ireland RBU	BOC Foundation for the Environment	073
South Pacific RBU	Water and energy conservation projects in Australia	117, 119	North America RBU	Hydrogen production for sustainable mobility and desulphurisation of fuels in the US	093
<b>Gist Division</b>	Cutting CO <sub>2</sub> emissions with improved route planning for trucks and environmentally friendly cooling systems in vehicles	121		Installation of hydrogen filling stations in the US	093
			Greater China RBU	Hydrogen for sustainable mobility in Canada	093
				Building a hydrogen infrastructure in Shanghai	111
			South Pacific RBU	Oxygenation of rivers	117



Engineering Division // Our state-of-the-art technology plays a vital role in ensuring energy supplies and protecting the climate and environment. ↳ *Disko Bay, West Greenland*



Our natural gas liquefaction plant in Hammerfest, Norway, is a good example of this. Constructed by Linde for our customer Statoil, this is the first plant in the world to separate the carbon dioxide contained in natural gas and pump it back into storage. This reduces the CO<sub>2</sub> released into the atmosphere by around 700,000 tonnes per year.

# ENGINEERING DIVISION

*With its extensive industrial know-how, our Engineering Division plays a strategic role in mastering today's energy issues. And it will move even further to the fore as we step up to tomorrow's energy challenges. Our state-of-the-art engineering solutions are actively helping to safeguard future energy supplies and protect the climate and environment across the broadest application spectrum – from environmentally friendly fuels and hydrogen to zero-emissions electricity and the liquefaction of natural gas for shipping.*

>> The Engineering Division is involved in plant engineering around the globe.

>> EMPLOYEES<sup>1</sup>: 5,326 IN TOTAL

>> BOARD MEMBER RESPONSIBLE FOR DIVISION: DR ALDO BELLONI

>> DIVISION MANAGERS: WERNER SCHWARZMEIER, DR MARKUS RAAB, DR BRUNO ZIEGLER

>> REVENUE (€ MILLION)<sup>2</sup>: 1,134

>> TOP 3 REGIONS ORDERS (IN %)<sup>3</sup>:

MIDDLE EAST: 46

EUROPE: 26

ASIA: 12

>> MAIN PRODUCTS<sup>3</sup>:

PETROCHEMICAL PLANTS: 50 %

NATURAL GAS PLANTS: 20 %

AIR SEPARATION PLANTS: 14 %

<sup>1</sup> As of 30 June 2007.

<sup>2</sup> H1 2007 (as of 30 June 2007).

<sup>3</sup> By order intake, as of 30 June 2007.

**Protecting the environment with GTL diesel** // GTL diesel features an extremely low concentration of hazardous substances and impurities such as sulphur and toxic aromatic and metal compounds. Combusting this fuel also produces significantly fewer polycyclic aromatic hydrocarbons (PAH), which are a health hazard. GTL diesel is therefore the preferred fuel in large cities, as its low sulphur content promises to improve air quality as we move forward. The fuel complies with all international standards for exhaust gases.

## Products and production

Few companies in the world have the in-house expertise and technology to handle complex, large-scale industrial projects, covering every step from the initial blueprints to handover of a turnkey plant. With more than 4,000 plants across more than 100 countries, our Engineering Division's competence is field-proven. It leads the market in all target market segments – air separation, olefin, synthesis gas, hydrogen and natural gas plants. We are constantly advancing our engineering processes and researching new technologies to meet growing needs to reduce costs, conserve scarce resources and protect the environment.

### GTL: conserving resources with synthetic fuels

The international gases and engineering business is developing increasingly close ties with the energy markets. Gas to liquids (GTL) processes are positioned as one of tomorrow's strategic enablers, alongside hydrogen in refinery processes, liquefied natural gas (LNG), coal gasification in combination with oxygen and other technologies facilitating the move towards CO<sub>2</sub>-free power plants (see also page 058). GTL involves a multi-step process for converting natural gas into liquid fuels. Drawing on years of experience in this area, Linde is currently bringing its GTL expertise to bear in various ongoing projects.

The innovative GTL process first produces a synthesis gas from natural gas using oxygen. This synthesis gas is then converted to biodegradable, sulphur-free, liquid hydrocarbons such as diesel fuel or kerosene in a second step (see text box in the right column).

Against the background of high oil prices, GTL technology is an attractive alternative as a future fuel source for global markets. GTL plants and the fuel they generate are already profitable if we assume crude oil prices of USD 50 per barrel (159 litres).

**GTL process: from natural gas to liquid fuel** // In the GTL process, natural gas is converted using atmospheric oxygen generated in an air separation unit. This reaction produces both hydrogen (H<sub>2</sub>) and carbon monoxide (CO), which together make up the synthesis gas. The Fischer-Tropsch process is then applied, using special catalysts to reform the synthesis gas into paraffin waxes and long-chain hydrocarbons. Finally, these are cracked to produce synthetic fuels. Linde offers systems and solutions for almost every step of the GTL process. In addition to air separation units, we also deliver gas purification, gas separation and partial oxidation (POX) plants.

### Major contract for Pearl GTL plant

The Engineering Division is a key player in the market for GTL plants. In 2006, we were awarded a contract by Qatar Shell GTL Ltd., a member of the Royal Dutch Shell Group, and Qatar Petroleum (QP) for the construction of eight large air separation units for the Pearl GTL plant in Ras Laffan Industrial City, Qatar.

Our Engineering Division is thus delivering the building blocks for what will be the largest integrated complex of its kind in the world. Pearl GTL will be generating a massive 860,000 cubic metres or so per hour. The huge capacity makes this the largest single contract ever placed for air separation units. Using natural gas as feedstock, the GTL plant is set to manufacture around 140,000 barrels of liquid hydrocarbons per day, including naphtha, GTL fuels, paraffin, kerosene and lubricant oils. The complex will also produce approximately 120,000 barrels per day of condensate, liquefied petroleum gas and ethane. Alongside the basic and detailed engineering, Linde is also responsible for materials procurement and monitoring, as well as construction and initial operation of the air separation complex.

**Linde and the ENCAP project** // As early as the start of 2003, Linde was already involved in setting up the ENCAP (Enhanced Capture of CO<sub>2</sub>) project, officially launched in 2004 under the EU's Sixth Framework Programme. ENCAP aims to develop suitable technologies for CO<sub>2</sub> separation in power plant processes. 33 industry partners and several universities and research bodies are involved in the project, which runs until early 2009. The total project budget is EUR 22 million. Key goals include the development of pre-combustion technologies, which significantly reduce CO<sub>2</sub> emissions from power plants. The Engineering Division is currently involved in the subprojects "Process and Power Systems" and "High-Temperature Oxygen Generation of Power Cycles".

Linde has accumulated extensive experience in the GTL segment over the years. As far back as the end of the 1980s, we delivered two air separators to South Africa, for example, for the world's largest GTL complex at the time. Our South Africa-based customer PetroSA, formerly Mossgas, uses the plant to produce 34,000 barrels per day of diesel as well as kerosene, lubricant oils and naphtha from natural gas. In 2006, we started work on two new projects. Alongside the Shell plant, another complex has also been ordered in Qatar by our customer Sasol – a clear sign of the importance oil companies are placing on this new technology. Another plant will also be constructed in Nigeria.

### Hydrogen plants for sulphur-free fuels

Hydrogen (H<sub>2</sub>) is an innovative, green energy carrier that shows great potential in the search for sustainable mobility solutions for the future (see also page 066, RBU Continental & Northern Europe). It also plays a major role in desulphurising the traditional fuels we use today, particularly petrol and diesel. Linde delivers the H<sub>2</sub> plants required for this purpose.

The global market for hydrogen plants has seen strong growth over the last few years in view of stricter legal requirements governing fuel purity.

In 2006 alone, we received several orders for plants with a capacity totalling 300,000 cubic metres of hydrogen per hour. Demand for these plants was highest in the Asian and European markets.

### CO<sub>2</sub> sequestration – protecting the climate with Linde technology

Over the coming decades, we will continue to meet most of our rising global energy needs with fossil fuels such as gas, oil and, in particular, coal. However, with the Kyoto protocol, the industrialised countries have undertaken a substantial reduction in CO<sub>2</sub> emissions. Time is pressing, particularly as experts worldwide are now also warning of dire effects on the global economy if we do not succeed in significantly reducing greenhouse gas emissions. In October 2006, Nicholas Stern, former Chief Economist of the World Bank, presented a report in collaboration with British Prime Minister Tony Blair and the Chancellor of the Exchequer, Gordon Brown. The Stern Review predicts a 20 percent drop in global GDP if climate change continues unchecked.

The challenge lies in minimising CO<sub>2</sub> emissions today without compromising the efficiency and profitability of industrial plants. We already play a pioneering role in shaping the technologies to enable this transition. These include solutions for zero-emissions power plants and CO<sub>2</sub> sequestration, for instance.

#### Linde supports CO<sub>2</sub>-free pilot plant

In CO<sub>2</sub> sequestration, carbon dioxide is separated from off-gases and stored underground to prevent it escaping into the atmosphere and harming the climate. Linde is currently supplying components for an emissions-free lignite power plant based on oxy-fuel technology (see text box page 060) to the energy group Vattenfall, for their pilot system at the Schwarze Pumpe plant in Lausitz, Germany. This 30-megawatt power plant is scheduled to commence operations in 2008. This project benefited from our extensive expertise in cryogenic air separation and CO<sub>2</sub> recovery. We also brought our far-ranging process and design know-how to bear.

↳ Europe's largest natural gas liquefaction plant on the Melkøya peninsula off Hammerfest, Norway, was officially commissioned in autumn 2007.



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Construction of a 250 to 600-megawatt oxy-fuel power station at the same location is also planned within the next decade, advancing the technology to industrial-scale series production. This will be followed by a 1,000-megawatt commercial plant in 2020, for competitive power generation costs.

**The oxy-fuel process** // In the oxy-fuel process, carbon dioxide generated through lignite combustion is isolated and liquefied at the power plant instead of being released into the atmosphere. In its liquid state, it can then be stored permanently deep below the Earth's surface or sea bed. In this process, the lignite is usually combusted with pure oxygen rather than air. To cool the flames, the majority of the carbon dioxide released in combustion is mixed with this oxygen. Dust and sulphur is then removed from the flue gas, which is dehumidified in a condenser. The CO<sub>2</sub> can then be compressed, liquefied and transported to the sequestration site.

#### **Hammerfest – world's first LNG plant of its kind**

A further example of CO<sub>2</sub> sequestration is the natural gas liquefaction plant in Hammerfest, Norway, which commenced operations in late autumn 2007. Constructed by Linde for its customer Statoil, this is the first plant in the world where the carbon dioxide contained in natural gas is not only physically separated, but subsequently dehumidified, condensed and pumped back into storage. This reduces the CO<sub>2</sub> entering the atmosphere by around 700,000 tonnes per year compared with most standard LNG plants, which currently release the gas into the atmosphere.

The energy required for natural gas liquefaction in this plant is generated using highly efficient gas turbines, which consume around a third less fuel than traditional turbines. The hot flue gas from these steam turbines is used to warm a heat carrier, known as hot oil, that then supplies the entire plant with thermal energy. This replaces the usual gas-fired furnace, significantly reducing emissions in comparison with previous plants. The gas turbines used are also equipped with special burners to ensure a particularly low concentration of nitrogen oxides (NO<sub>x</sub>) in the fumes.

Another global first for Hammerfest is our application of a technology that collects all gases released when loading the products onto tankships, returns them to the LNG plant and then reliquefies them. These are burnt by torch in conventional plants and therefore released into the atmosphere.



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## Improving energy efficiency, cutting emissions

### Green, zero-emissions LNG transport

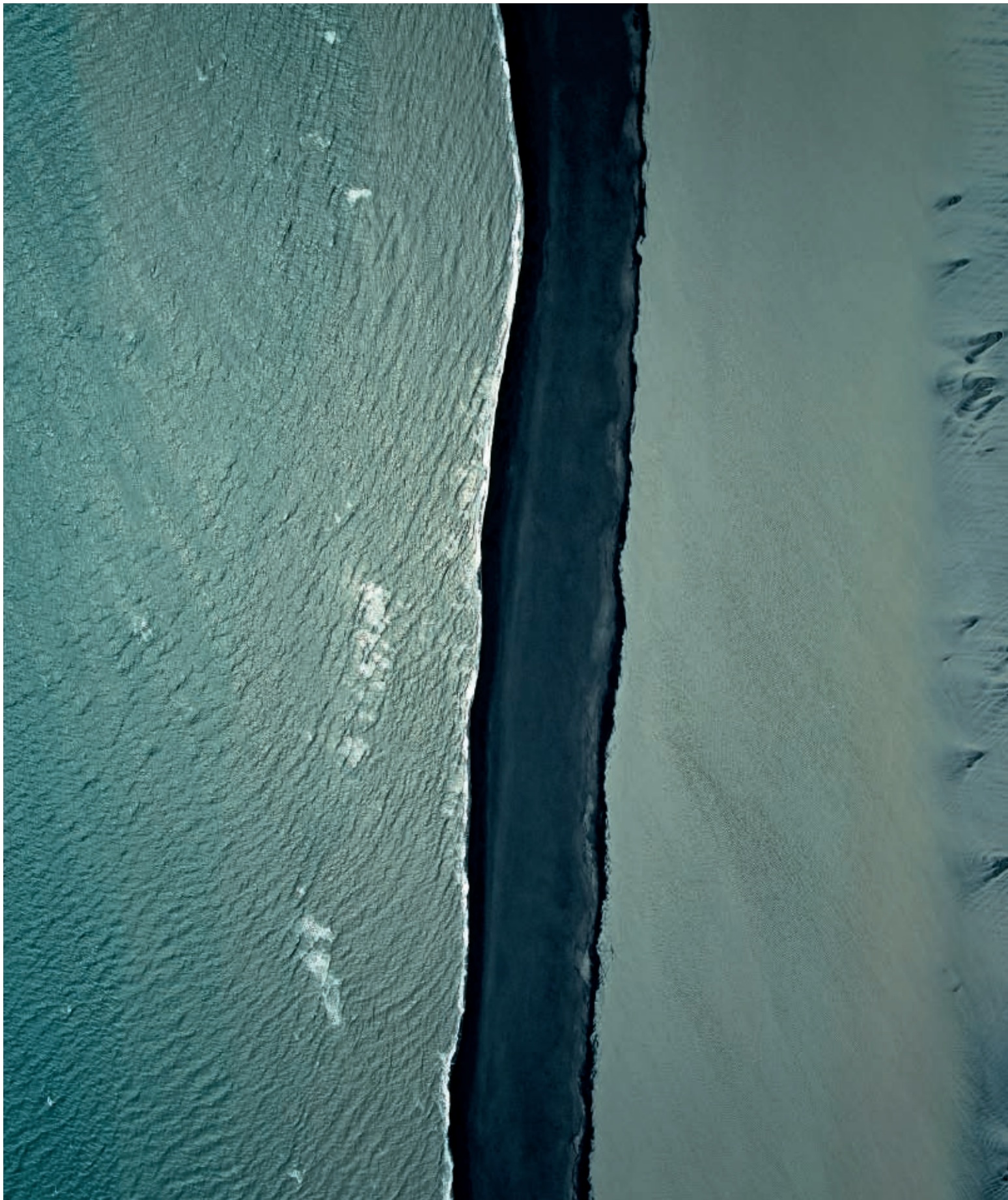
Where natural gas is required in remote locations such as Hammerfest, in Northern Norway, it makes good economic and environmental sense to liquefy it on site and then transport it to these far-flung customers by LNG tankers. The Engineering Division offers energy-saving, environmentally friendly equipment for this type of transport.

The larger the tanker, the more worthwhile reliquefaction becomes. The LNG is stored on board at minus 163 °C, and reliquefying the boil-off ensures delivery of the full loading capacity. Our affiliate Cryostar developed a particularly energy-saving recondensation process and delivers the majority of the cryogenic components. Reliquefaction becomes particularly cost-effective in combination with a slow-running diesel engine over long distances. Thanks to the low CO<sub>2</sub> emissions, this method is also more environmentally friendly than conventional steam-turbine propulsion systems, in which the boil-off gas is combusted in boilers using heavy fuel oil.

### Significant reduction in ethylene plant emissions

At the beginning of 2006, Selas-Linde GmbH, an Engineering Division subsidiary, commissioned two new ethylene cracking furnaces for the OMV refinery in Schwechat, Austria. The furnaces feature a newly developed burner that generates very low NO<sub>x</sub> levels of 60 mg/Nm<sup>3</sup>. This significantly undercuts the legal limit of 100 mg/Nm<sup>3</sup> and represents best available technology (BAT), making an important contribution to protecting the environment.

**Reliquefaction units for new fleet of LNG tankers** // Cryostar, a subsidiary of the Engineering Division and leading supplier of LNG tanker equipment, received an order from Samsung Heavy Industries in May 2007 with a total volume of over 50 million US dollars. Part of this order involves Cryostar delivering systems for on-board reliquefaction of boil-off gases for five LNG tankers, to be constructed by 2008. With a maximum loading volume of 265,000 cubic metres, these state-of-the-art membrane tankers are the largest ever produced. They are destined for LNG transport between Qatar and the USA.

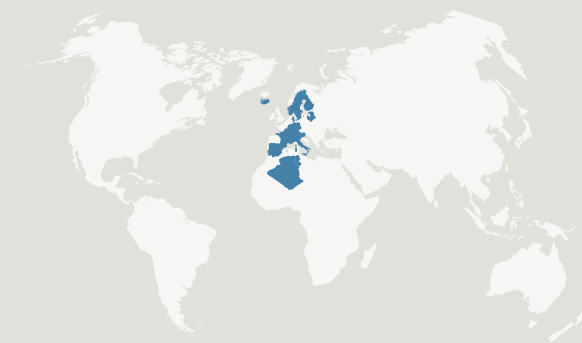


Continental & Northern Europe Regional Business Unit // Climate and environmental protection are key elements of our Corporate Responsibility activities in this region. ↳ *Skeidarársander sand flats, South Islands, Iceland*



We focus, for example, on the development of hydrogen technologies that are fit for future mobile applications. We recently launched operations at Germany's second hydrogen liquefaction plant in Leuna, set to play a key role in enabling the widespread use of hydrogen as vehicle fuel.

# CONTINENTAL & NORTHERN EUROPE



*Continental & Northern Europe ranks alongside the US as one of the world's most powerful established industrial regions. This region is also the undisputed hub of the industrial gases business worldwide, also providing valuable momentum for future political, social and economic developments, particularly through the European Union and its core members. So it is fitting that awareness surrounding the defining role of environmental and climate protection be so securely anchored at an early stage in this region. And for The Linde Group, whose historical roots lie in Europe, this topic is naturally a key focus for our Corporate Responsibility activities in this area. We provide details of our main social and community projects in Continental & Northern Europe in the "Corporate Citizenship" chapter, page 036.*

>> The Continental & Northern Europe Regional Business Unit includes the following countries: Germany/Austria/Switzerland/France/Benelux/Spain/Portugal/Italy/Denmark/Sweden/Norway/Finland/Iceland/Estonia/Latvia/Lithuania/Algeria/Tunisia.

>> EMPLOYEES<sup>1</sup>: TOTAL 7,886/FEMALE 27%/MALE 73%

>> BOARD MEMBER RESPONSIBLE FOR RBU: DR ALDO BELLONI

>> RBU MANAGER: PETER STOCKS

>> REVENUE (€ MILLION)<sup>2</sup>: 1,484

>> MARKET SHARE: 26%

>> TOP 3 COUNTRIES REVENUE (€ MILLION)<sup>2</sup>:

GERMANY: 543

SWEDEN: 162

BENELUX: 148

>> MAIN PRODUCTION PLANTS:

AIR SEPARATION PLANTS: 63

CO<sub>2</sub> PLANTS (616 KTPY<sup>3</sup>): 12

HYDROGEN PLANTS: 12

<sup>1</sup> As of 30 June 2007. Male/female ratio calculated based on total number of Linde Group employees in the region.

<sup>2</sup> H1 2007 (as of 30 June 2007), discounting revenue generated through joint ventures.

<sup>3</sup> Total plant capacity expressed in kilotonnes per year.

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## Market leader in Continental & Northern Europe

The Continental & Northern Europe region houses the traditional core markets for our gases business, which today reach from the North Cape to Algeria and from Portugal to the Baltic states. At a volume of approximately € 9.4 billion, Continental & Northern Europe represents the second-largest gas market in the world and is The Linde Group's strongest sales region. With a market share of around 26 percent, we generate approximately 31 percent of our total global gas revenue here. Within this region, Germany accounts for the lion's share of sales, at around 37 percent. With 60 large gas production centres, we offer our entire product portfolio of industrial and medical gases in Continental & Northern Europe and operate a dense sales and distribution network, supplying customers of all sizes with cylinder, liquid tank, on-site and pipeline deliveries.

## Taking our environmental responsibilities to heart

### EU legislative framework

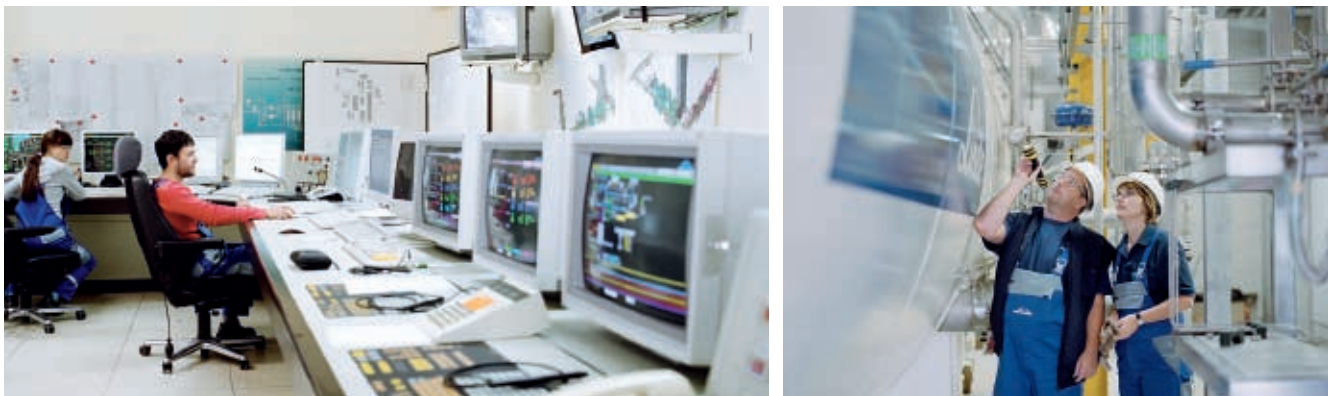
A strong awareness of the importance of environmental and climate protection took hold early on in Europe. Political leaders were quick to realise the importance of sustainable development. So back in 2001, the European Union (EU) drew up its sustainability strategy, which defines a framework for environmental, economic and social development. And the nations ratifying the Kyoto Protocol, which came into force in January 2005, included all the EU member states. This commits them to reducing greenhouse gas emissions by eight percent relative to the 1990 baseline over the period from 2008 to 2012. The EU also passed a Council Decision in early 2007, undertaking to decrease emissions 30 percent on 1990 values by the year 2020 under an international agreement.

However, in the long-term, industrialised countries need to cut their greenhouse gas emissions by 60 to 80 percent in comparison with the 1990 baseline. This is the only way to achieve the aim of restricting the global average temperature increase to a maximum of two degrees Celsius above pre-industrial levels and avoiding far-reaching disruption to the climate system

### Linde's contribution to sustainable development

Sustainably reducing global carbon dioxide emissions involves three core measures: cutting energy consumption, increasing the proportion of renewable energy and improving energy efficiency. This means greater use of low-carbon energy sources and technologies to bind and store CO<sub>2</sub>.

Against this background, our Corporate Responsibility policy commits us to gearing all our business processes in Continental & Northern Europe towards sustainability, in turn providing our customers with innovative products to assist them in reaching their aims in this area. We therefore offer a wide variety of solutions for climate and environmental protection, from the use of hydrogen as an alternative energy carrier through technologies for safe long-term CO<sub>2</sub> storage to an environmentally friendly dry-cleaning concept.



↳ Left: Control room at the Leuna gas plant, Germany  
 ↳ Right: Hydrogen liquefaction plant, Leuna, Germany

**trailH2™: innovative system for mobile H<sub>2</sub> refuelling** // Linde unveiled a key building block in the future hydrogen supply infrastructure at the 2006 FIFA World Cup™ in Germany. trailH2™ is an innovative mobile refuelling unit for hydrogen-powered vehicles. It is also fully self-sufficient, generating its own electricity from an integrated fuel cell supplied by the hydrogen it carries. This allows drivers to fill up anywhere they like, with no need for an external power supply. The hydrogen is stored in a semi-trailer in liquid form (LH<sub>2</sub>). Since LH<sub>2</sub> has a higher energy density than CGH<sub>2</sub>, this increases the unit's energy capacity. trailH2™ supplies both gaseous and liquid hydrogen. Vehicle refuelling is fully automated and operated by touch screen, allowing the user to easily select the type and amount of fuel required.

#### Protecting the climate and environment with hydrogen

We see hydrogen as the most important energy carrier of the future, set to play a particularly crucial long-term role in road transport. If hydrogen is obtained from renewable resources, this gives us a sustainable end-to-end concept that tackles the dwindling fossil fuel issue and supports the Kyoto Protocol on climate protection. Generating this bio-hydrogen is part of Linde's research and development activities, which span the assessment of a wide range of hydrogen production methods from biomasses of the most varied origins. All in all, the aim is to generate hydrogen as efficiently as possible. The first methods have already passed laboratory tests, and we will now be putting them through their paces in commercial pilot projects.

#### Sustainable mobility with hydrogen

As one of the world's largest hydrogen suppliers, Linde is systematically putting the building blocks in place to position hydrogen as a future mobility enabler. We are involved in numerous European development and demonstration projects, such as CEP (Clean Energy Partnership), HYFLEET:CUTE (Clean Urban Transport for Europe) and Zero Regio. The long-term aim of all our efforts is the gradual construction of a zero-emission infrastructure, largely relying on regenerative energy sources such as wind and hydropower, biomass and solar energy. We not only develop the technologies to enable this transition, but also play an active part in raising public awareness for the benefits of zero-emission fuels.

A significant milestone here was the official opening of the Linde Hydrogen Centre (LHC) in Unterschleissheim, near Munich, in October 2006. This unique facility bundles a hydrogen filling station, technology test centre, training and events forum, and presentation platform under one roof (see page 043). The heart of the facility is the filling station, which supplies a test fleet of hydrogen-fuelled cars and buses with both liquid and compressed gaseous hydrogen. Refuelling an average of ten hydrogen vehicles a day, the LHC is one of the busiest hydrogen filling stations in the world. Our aim is to meet the LHC's entire hydrogen requirements using sustainable production methods in the near future.



↳ Hydrogen liquefaction plant, Leuna, Germany

In January 2007, we used our mobile trailH2™ unit to supply several BMW Hydrogen 7 vehicles with climate-neutral hydrogen fuel during the Annual Meeting of the World Economic Forum in Davos, Switzerland. This was guaranteed by the acquisition of CO<sub>2</sub> certificates. Sustainable hydrogen generation is a strategic aim for both Linde and BMW. And as exclusive hydrogen partner for the BMW CleanEnergy project, we will soon be able to meet current hydrogen automotive demands using sustainable production methods.

BMW is presenting its limited edition Hydrogen 7 series across the globe on its second CleanEnergy World Tour in 2007. And since July this year, the Linde AG car fleet also boasts a brand new saloon from this series, featuring a bivalent hydrogen-powered combustion engine (see glossary). Professor Dr Wolfgang Reitzle, Chief Executive Officer of Linde AG, is using this saloon as his company car for six months – providing compelling proof of the viability of hydrogen for everyday use.

In June 2007, the new Honda FCX was unveiled on the Swedish island of Gotland, featuring Europe's latest fuel cell technology. The Linde Group was the exclusive supplier of hydrogen at this demonstration, again using a mobile filling station.

One month prior to that, we delivered a containerised H<sub>2</sub> filling system for Hamburg airport. This supplies a pick-up truck and two fuel-cell-powered tow trucks from the Still company, all of which will be used at the airport on a daily basis in the future. The airport project also uses hydrogen without a greenhouse footprint and will initially run for two years.

#### **CO<sub>2</sub>SINK – investigating separation and safe storage of CO<sub>2</sub>**

Achieving Europe's ambitious climate protection goals means preventing the release of carbon dioxide into the atmosphere over the long term. This greenhouse gas is a by-product of the fossil fuel combustion process, and is created for instance when heat and electricity are generated in coal-fired power plants. The aim is to separate and capture the CO<sub>2</sub> in the power plant and store it safely instead of emitting it. This is especially important since all experts agree that coal will continue to play a key role in meeting global energy needs for decades to come.

As a leading gases and engineering company, The Linde Group develops innovative technologies for CO<sub>2</sub> separation and storage, and is involved in various research and pilot projects in this area (see also Engineering Division, page 056). We are a partner in the first European pilot project, CO<sub>2</sub>SINK, for example, focusing on underground CO<sub>2</sub> storage in Ketzin, in the German state of Brandenburg. Managed by the GeoForschungsZentrum Potsdam (GFZ), this project brings together 18 partners from nine countries across Europe to investigate how CO<sub>2</sub> can be injected and stored in porous rock reservoirs filled with salt water deep below the Earth's surface.

The CO<sub>2</sub>SINK project officially kicked off in June 2007 with experiments on the first storage systems. Linde is responsible for all intermediate storage facilities and systems for pressure and volume related CO<sub>2</sub> conditioning prior to storage. We have also overseen development of the technology for injecting the gas into the ground. The concept involves controlled heating of around 1.5 tonnes of CO<sub>2</sub> per hour, and injection at relatively high pressure (70 to 100 bar) into the deposit at a depth of around 700 metres. We deliver the CO<sub>2</sub> in cryogenic liquid form from the Leuna refinery site, where it is generated as a by-product. It is then initially stored in two tanks in Ketzin prior to being injected into the ground. The project is sponsored by the EU as part of its ETP ZEP (European Technology Platform for Zero-Emission Fossil Fuel Power Plants) initiative. The plan is to inject 60,000 tonnes of pure carbon dioxide into a former salt dome over the course of two years from October 2007. Underground storage is one possible way of significantly reducing CO<sub>2</sub> emissions in the future, provided this greenhouse gas is separated during fossil fuel combustion.

**“Lindeecosostenibile” – environmental responsibility in Italy** // As part of its Corporate Responsibility activities, our Italian affiliate Linde Gas Italia has launched a new programme called Lindeecosostenibile. This represents a commitment by Linde to stepping up its contribution to sustainable environmental protection in Italy. The programme will promote responsible, green operations across all areas of the company. This includes employee conduct, our purchasing and energy strategies, key performance indicators, communication and our dealings with the public. However, the programme is primarily directed towards our internal stakeholders, specifically at heightening their sense of environmental responsibility.

**Lindeecosostenibile // Employee conduct / Procurement / Energy / KPIs / Communication / Public relations**

#### **OCAP project – improving plant growth through CO<sub>2</sub> recycling**

Linde is involved in another innovative project in the Netherlands, in partnership with the Shell and VolkerWessels companies, which also contributes to substantial cuts in CO<sub>2</sub> emissions. In the OCAP (organic CO<sub>2</sub> for assimilation by plants) project, the carbon dioxide generated as flue gas in the Shell refinery in Pernis, near Rotterdam, is transported around 85 kilometres to Amsterdam via a disused oil pipeline. There it is used to supply several hundred greenhouse operators, whose plants grow much better when exposed to higher concentrations of CO<sub>2</sub>. To achieve this, the operators previously had to generate CO<sub>2</sub> using natural gas-fired furnaces. As part of this pipeline solution, Linde constructed a compressor station and buffer facilities and is responsible for the CO<sub>2</sub> supply. The OCAP project benefits the environment in several ways. On one hand, by obtaining their CO<sub>2</sub> directly from the refinery, greenhouse operators can save a total of around 95 million cubic metres of natural gas per year, which would otherwise be burnt to create carbon dioxide – thereby conserving resources. And, on the other hand, since the project was kicked off in summer 2005, the pipeline supply has been reducing the amount of carbon dioxide released into the atmosphere by approximately 170,000 tonnes annually. So the OCAP project also aligns with Shell’s sustainability strategy, allowing that company to significantly reduce CO<sub>2</sub> emissions from its Pernis refinery.

#### **Eco-friendly textile cleaning**

With the Fred Butler® brand, our Cleaning Enterprises subsidiary offers an innovative, environmentally friendly process for cleaning textiles, making a sustainable contribution to environmental protection. The procedure replaces the commonly used agent perchloroethylene (perc) with carbon dioxide recycled from industrial applications. Building on early successes in various countries in Western and Northern Europe, Fred Butler® opened its first German branch in Frankfurt am Main in May 2006. This was then followed in March 2007 by two more shops and a central cleaning facility in Munich, and we are planning to open 33 more of these areas across Europe by 2008. In the Fred Butler® concept, the articles for cleaning are picked up from convenient local drop-off points and delivered to central facilities. The method is also suitable for sensitive fabrics such as leather, silk, fur and down. The laundry is placed in a sealable, drum-shaped cleaning chamber from which the air is expelled. Next, gaseous CO<sub>2</sub> is pumped in until the pressure is over 50 bar. Liquid CO<sub>2</sub> is added along with a small quantity of biodegradable surfactants, and the cleaning process begins. The liquid CO<sub>2</sub> binds grease, oil and other dirt particles and gently removes them from the fibres. When cleaning is complete, distillation separates the impurities from the CO<sub>2</sub>. The carbon dioxide can then be used for the next cleaning cycle, with only around two percent escaping into the air. The procedure is free of unpleasant odours and poses no health risks. The Fred Butler® CO<sub>2</sub> method has already won several awards from organisations including the EU for its eco-friendly ratings. In March 2007, the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety awarded us with Blue Angel environmental certification, and we have also received the Scandinavian “Svanen” (Nordic Swan) label. We are currently the only dry-cleaning company to gain this type of environmental approval – an important step towards our goal of becoming the greenest dry-cleaners in Europe.



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### Corporate environmental protection

We have launched a wide range of optimisation initiatives with a view to cutting energy consumption and/or increasing capacity in our production plants, as well as streamlining distribution and delivery processes in Continental & Northern Europe. These initiatives play an important role in conserving resources and avoiding (indirect) greenhouse gas emissions.

The electricity saved just by using a new turbo compressor for oxygen in our air separation plants amounts to around 13,000 megawatts per year, for instance.

To promote this type of achievement within our organisation, we have launched an energy prize for air separation plants in Germany. This is awarded to the managers of the plants displaying the most energy-efficient production.

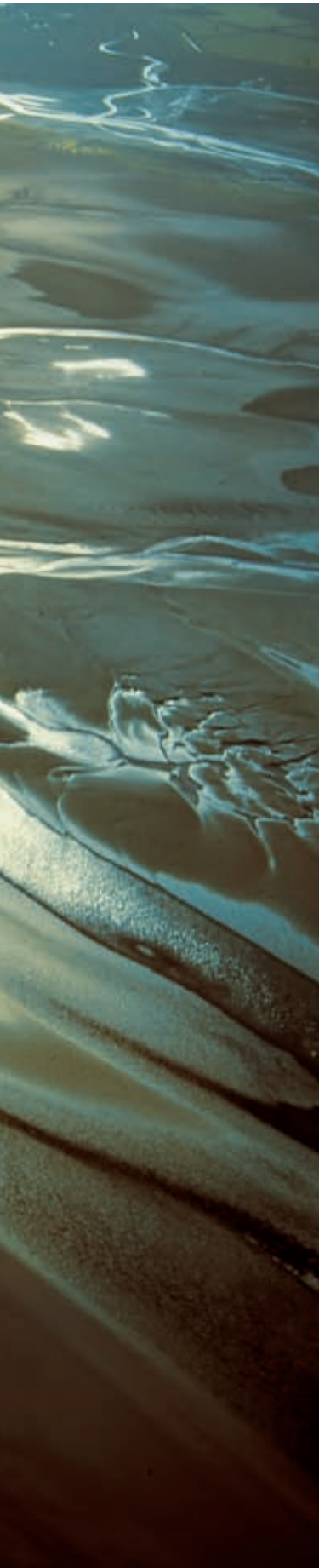
In Western Europe, we have kicked off a Six Sigma project (see glossary) to optimise production at our air separation plant in IJmuiden, the Netherlands. Energy savings from this are estimated at 6,700 megawatt-hours per year. Another project at the same location has also cut energy consumption by a further 700 megawatt-hours per year by reducing the temperature of the coolant in winter months.

In Northern Europe, we have implemented an environmental management system, officially certified in Sweden.

We have also taken measures to make the distribution of our gases by truck more efficient and environmentally friendly, using a roadshow to launch a new route planning software for this region. Increasing planning efficiency saves kilometres and therefore cuts CO<sub>2</sub> emissions from our trucks. In Germany alone, improved route planning saved approximately 600,000 kilometres on customer deliveries in 2006 in comparison with the previous year. We have also modernised our fleet in Germany, replacing several five to six year-old trucks with new, lighter vehicles featuring lower fuel consumption, which comply with the EURO4 or even EURO5 emissions standards (see glossary). We also hold special eco-driving training courses to help our drivers increase fuel efficiency.



UK & Ireland Regional Business Unit // Our Corporate Responsibility strategy in this region includes a strong focus on education. ↪ *Mud flats at Solway Firth, Northern England*



Our Inspiring Gases programme helps educational facilities foster an interest in science among young people. This includes the “It’s a gas” series of practical presentations on the properties and applications of industrial gases.

# UK & IRELAND



Our UK & Ireland region is the original stronghold of the former BOC Group and also home to its previous headquarters. Corporate Responsibility in this region focuses above all on BOC's commitment to society – in particular on community involvement and environmental protection. Linde is now driving some of these former BOC projects at Group level from its headquarters in Germany. Others continue to be managed locally.

>> The UK & Ireland Regional Business Unit includes the following countries: UK/Ireland.

>> EMPLOYEES<sup>1</sup>: TOTAL 3,621/FEMALE 15 %/MALE 85 %

>> BOARD MEMBER RESPONSIBLE FOR RBU: DR ALDO BELLONI

>> RBU MANAGER: MIKE HUGGON

>> REVENUE (€ MILLION)<sup>2</sup>: 583

>> MARKET SHARE: > 50 %

>> TOP COUNTRIES REVENUE (€ MILLION)<sup>2</sup>:

GREAT BRITAIN: 530

IRELAND: 53

>> MAIN PRODUCTION PLANTS:

LARGE AIR SEPARATION PLANTS: 7

CO<sub>2</sub> PLANTS (99 KTPY<sup>3</sup>): 4

HYDROGEN PLANTS: 7

<sup>1</sup> As of 30 June 2007. Male/female ratio calculated based on total number of Linde Group employees in the region.

<sup>2</sup> H1 2007 (as of 30 June 2007), discounting revenue generated through joint ventures.

<sup>3</sup> Total plant capacity expressed in kilotonnes per year.

## Strong foothold in UK & Ireland

In May 2007, Linde sold its own gas business in Great Britain to comply with an EU anti-trust ruling that accompanied the purchase of BOC Group plc. Since then, The Linde Group is represented solely through BOC in the UK & Ireland in this area.

As Britain is BOC's home market and traditional stronghold for industrial and medical gases, we enjoy an excellent position that has strengthened over time. With an approximately € 1 billion share of a gas market totalling approximately € 1.5 billion, BOC is the clear number one in the UK & Ireland. We also plan to leverage future growth opportunities in facilities management, environmental protection and selected on-site projects to further increase our lead on the competition.

Through our closely knit sales and distribution network for industrial, medical and food gases (Sureserve), we serve some 4,500 customers each day. Alongside compressed and liquefied gases, we deliver products, solutions and services from our extended portfolio.

## Pivotal role for Corporate Responsibility at BOC

Corporate Responsibility is firmly anchored in the culture and heritage of BOC. Continuing this tradition, we work actively with all our stakeholders – shareholders, customers, suppliers, employees, local communities and governments. BOC introduced a Code of Conduct back in 2003 and is signatory to the UN Global Compact. All Global Compact principles are integrated in BOC's Code of Conduct, which sets out the ethical and social parameters that guide BOC's business dealings. All employees are expected to follow the code. Key content and standards from BOC's Code of Conduct have been incorporated into the new Code of Ethics drawn up by The Linde Group. During 2007, this Code of Ethics was introduced at all Linde sites worldwide. It provides a binding framework guiding all employees towards responsible, respectful behaviour in their dealings on behalf of the company (see page 032).

BOC also joined the UK's leading benchmark of responsible business, Business in the Community (BiTC) Corporate Responsibility Index. This index assesses companies' performance against a wide range of environmental, social and ethical measures. BOC has also been represented in the index's sister survey, the Business in the Environment (BiE) Index since 1995. In 2005, BOC scored 94.5 percent, ranking 24<sup>th</sup> out of 131 participants (compared with 89 percent and placed 39 out of 144 participants in 2004). On the BiTC Environment Index, BOC also scored 95 percent in 2005. This places us among the top 23 out of a total of 145 participants and number one among the 12 participants representing the raw materials industries (chemicals, paper, metal).

BOC's Corporate Responsibility activities were mainly focused on the following three core pillars in the UK & Ireland:

- Environment, through the BOC Foundation for the Environment
- Education, through the Inspiring Gases programme
- Medical research, through studies such as the study of bronchitis, for example

These core programmes are flanked by wider activities that underpin BOC's commitment to the wider community. These include our matched giving scheme, where we match the donations made by our employees to charitable causes. We also support selected social programmes that benefit the communities in which BOC people work and live. Originally introduced by the British BOC headquarters, our matched giving scheme has now devolved to local businesses. During the period under review, we also demonstrated our commitment to the arts and cultural heritage. Our Emerging Artist Award, for example, was created to support promising young artists in the UK and was last presented in 2005.

### BOC Foundation and commitment to the environment

The UK-based BOC Foundation for the Environment was established in 1990 to fund air and water quality projects. Over the last 17 years, the BOC Foundation has been involved in more than 140 projects in the UK with a total investment volume well in excess of € 10 million. New and ongoing projects include:

- a review of roadside emissions testing
- development of liquid petroleum gas (LPG) "clean" fuel cell technology



↳ Left and right: Gas filling plant at the Morden site, Surrey, Great Britain

- a new oxidation technique for combusting pharmaceutical toxic waste
- an evaluation of photovoltaics for solar power
- research into the impact of electrical and electronic hazardous waste
- a programme to develop low-cost electrolysers in support of the hydrogen economy
- a joint project with France to investigate ozone depletion in the Channel region

BOC also joined forces with the North East Process Industry Cluster (NEPIC) to launch an environment award for schools in the North East of England. Pupils are invited to submit practical ideas on environmental issues ranging from recycling to preservation of air and water resources. In February 2007, for instance, the award was presented to a team at St. Michael's School, Billingham, for their efforts in maintaining the John Whitehead Park in Billingham.

The Linde Group has decided to continue and complete all current BOC Foundation projects but not to launch any new projects (see page 037).

Our gases and application processes also make a lasting contribution to protecting the environment and responsibly conserving natural resources. BOC has formed a partnership with the Morgan Motor Company, for example, to develop LIFECar, the world's first hydrogen-powered sports car. The car is setting new standards for emission control, range and performance. The LIFECar is based on Morgan Aero Eight technology. A hydrogen fuel cell manufactured by QinetiQ produces electric energy that powers four separate electric motors – one at each wheel.

We are also involved in a pilot project with Dabbrook Services. This involves combining solar power with hydrogen fuel cell technologies to develop an eco-friendly water management system for the Environment Agency in the UK.

Looking within company walls, efforts to minimise environmental impact focus primarily on further reducing CO<sub>2</sub> emissions at our production plants by improving energy efficiency. Our far-reaching energy management programme, for example, cut CO<sub>2</sub> output by a total of 1,110 tonnes a year.

Various plants in the UK & Ireland jointly established an energy forum in 2006. The objective is to develop best practices in energy management. This project was supported by Carbon Trust, a government-funded independent company that helps businesses and the public sector in the UK to cut carbon emissions. As this project progressed, employees became much more conscientious in their use of energy. Various Energy Awareness Programmes at different plants prompted employees to take a more critical look at energy consumption within their sphere of influence and to look for areas of potential savings.

We are also working to optimise distribution efficiency. Concrete measures include improving transport logistics (e.g. through smart route planning to reduce mileage) and modernising our fleet (to deploy newer vehicles with lower fuel consumption and emission levels).

#### Commitment to education

In a modern, outward-looking knowledge society education plays a pivotal role in giving young people a chance to carve out a success-

**Recycling programme for mobile phones** // In 2006, BOC launched an environmental programme that aims to collect and recycle used mobile phones from all BOC employees in the UK. The old phones are either repurposed or broken down into their component parts and recycled. BOC is working with a mobile phone company and a recycling specialist for this project. The proceeds are donated to charitable causes, such as The National Autistic Society. This project brings a two-pronged benefit, helping the environment and local people in need.



↳ Left: Control room at the Thame gas plant, Oxfordshire, Great Britain  
 ↳ Centre: Cylinder filling at the Thame helium plant, Oxfordshire, Great Britain  
 ↳ Right: Analysis laboratory at the Morden site, Surrey, Great Britain

ful future, which is why we are involved in several initiatives in this area. Run in cooperation with the Royal Society of Chemistry, our Inspiring Gases education programme, for example, is designed to complement the chemistry syllabus at local schools and other educational facilities and stimulate young people's interest in science and chemistry in particular. Linde will continue to run the Inspiring Gases project (see page 038).

In addition, BOC's UK-wide network of science ambassadors staged a series of talks and presentations called "It's a Gas" during 2006. These demonstrated the properties and applications of industrial gases at various schools and universities in South Wales, Bristol, Surrey, Birmingham and Leeds, for example. "It's a Gas" also covers safety issues.

In April 2006, BOC also hosted the Industry and Education Partnership Forum at St. James's Palace in London. The event was attended by high-ranking guests such as HRH The Duke of Kent. The objective of the forum was to bring together leading industrialists and educationalists to help foster and discuss links between the two sectors, finding ways of extending mutual support and developing targeted concepts.

Other educational activities in the UK included the BOC Gases Challenge, designed to encourage secondary school students to

develop chemical engineering ideas. The most promising ideas are rewarded.

Finally, BOC supports a wide range of local education bodies and initiatives including the Institute of Chemical Engineers environment award, the Salters' Festival of Chemistry and the UK Council for Industry and Higher Education.

#### Commitment to medical research

Looking beyond industrial gases, medical gases also play a pivotal role in our portfolio. We feel that our advanced know-how in this area places a wider social obligation on us to contribute to the medical establishment as a whole. BOC leads or supports a number of research programmes, clinical trials and patient care opportunities. Over the past few years, for example, we sponsored studies on chronic obstructive pulmonary disease (COPD) and lung cancer. We are also currently involved in a major study being conducted on bronchiolitis, a type of lung infection, at St. Mary's Hospital, Paddington. In conjunction with the British Thoracic Society and other partners, we also founded the COPD consortium. Our support for clinical groups is further demonstrated by our long-term sponsorship of the BOC Chair of Anaesthesia at Addenbrookes Hospital. Last but not least, we regularly run clinical seminars on the use of medical gases for pain relief and respiratory problems.

**British team of doctors run test on Mount Everest** // Established in 2006, the BOC Medical Inspire Award (see also page 039) was awarded to a team of mountaineering doctors. During the first half of 2007, the team of five doctors climbed the summit of the highest mountain in the world to run medical tests under extreme conditions. The objective of the expedition is to attain a better medical understanding of how the body reacts to particularly low oxygen levels at extreme altitude and to increase the chances of survival of critically ill patients suffering from oxygen deficiency or chronic respiratory disorders. BOC supported this clinical research project by providing financial aid and a range of calibration gases for the measuring equipment as well as oxygen for the participating doctors. The Mount Everest tests are part of a wider heart/lung study testing the cardiovascular fitness of over 1,000 volunteers, including participants from BOC's offices in Guildford.



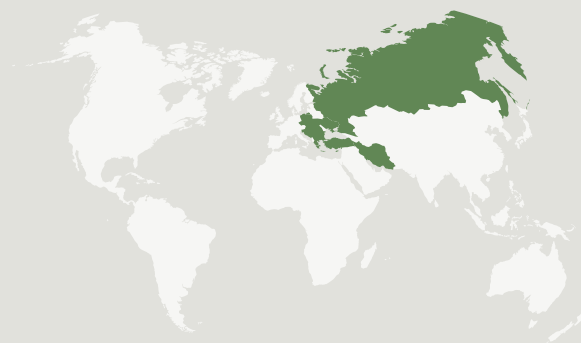
Eastern Europe & the Middle East Regional Business Unit // Our presence in developing markets poses particular challenges for Corporate Responsibility. ↳ *Vaygach Island in European Russia; tundra with permafrost*





The focus in this region is on transferring knowledge from established countries such as Hungary (visual: gas production plant in Kazincbarcika) to emerging markets such as the Ukraine. We pay special attention to promoting young, talented employees through our HR development schemes.

# EASTERN EUROPE & MIDDLE EAST



The Eastern Europe & Middle East region is experiencing a dynamic economic upturn, which can be traced back to the dissolution of the Soviet Union in 1991. In the wake of this historic event, many of the former Warsaw Pact states opened their borders and aligned themselves increasingly with the West. At the beginning of the 1990s, many Western technology corporations started expanding into Eastern European and stepping up investment activities in this region. In addition to current established markets such as Poland, the Czech Republic and Hungary, the region is also home to many emerging markets. These include developing areas such as Russia or the Ukraine. Particularly in these emerging markets, our Corporate Responsibility activities primarily focus on our employees, HR development schemes, social commitment and production-related environmental protection.

>> The Eastern Europe & Middle East Regional Business Unit includes the following countries: Czech Republic/Slovakia/Poland/Hungary/Romania/Russia/Ukraine/Slovenia/Croatia/Serbia-Montenegro/Bosnia-Herzegovina/Macedonia/Bulgaria/Greece/Cyprus/Turkey/Iran.

>> EMPLOYEES<sup>1</sup>: TOTAL 3,867/FEMALE 26 %/MALE 74 %

>> BOARD MEMBER RESPONSIBLE FOR RBU: DR ALDO BELLONI

>> RBU MANAGER: DR HANS-HERMANN KREMER

>> REVENUE (€ MILLION)<sup>2</sup>: 340

>> MARKET SHARE: 34 %

>> TOP 3 COUNTRIES REVENUE (€ MILLION)<sup>2</sup>:

CZECH REPUBLIC: 93

HUNGARY: 66

POLAND: 54

>> MAIN PRODUCTION PLANTS:

AIR SEPARATION PLANTS: 24

CO<sub>2</sub> PLANTS (389 KTPY<sup>3</sup>): 9

HYCO PLANTS: 2

<sup>1</sup> As of 30 June 2007. Male/female ratio calculated based on total number of Linde Group employees in the region.

<sup>2</sup> H1 2007 (as of 30 June 2007), discounting revenue generated through joint ventures.

<sup>3</sup> Total plant capacity expressed in kilotonnes per year.

## Dynamic growth in Eastern Europe

Linde started investing in the local gases industry soon after Eastern European countries started opening their markets. As a result, we have been active in the Czech Republic since 1991, in Hungary since 1992 and in Poland since 1993. Since then, we have continuously expanded our position in Eastern Europe, and are now the market leader in all Eastern European countries where we are based.

The Eastern Europe & Middle East region comprises two countries (Poland and Hungary) as well as three subregions (Czech Republic/Slovakia, Rumania/Russia/Ukraine, and Southeast Europe/the Middle East). The total gases market in this region is estimated at around EUR 1.9 billion. With a market share of approximately 34 percent, Linde is clearly in pole position.

The gases business in the region is growing at an annual rate of between seven and ten percent. Experts expect this high level of growth to continue for the next five to ten years. The key growth drivers are the metal, manufacturing and chemical industries.

### Linde market shares in the Eastern Europe & Middle East region

Country/subregion	Market share
Czech Republic/Slovakia	55 %
Hungary	68 %
Poland	30 %
Southeast Europe/the Middle East	29 %
Rumania/Russia/Ukraine	21 %

The mix of established countries (Czech Republic, Poland, Hungary) and developing markets (Russia, Ukraine) enables us to transfer our know-how and best-practice solutions to these up-and-coming areas. We have been able to systematically strengthen our market presence in Russia and the Ukraine, for example, by building on-site plants to supply several major customers. We are also concentrating on expanding our presence in Turkey. The acquisition of the Turkish gases company Karbogaz in 2006 and BOS in spring 2007 has enabled us to bridge the geographical gap between Eastern Europe and the Middle East.

## HR development schemes

The transfer of knowledge and expertise is particularly important in emerging markets to ensure the success of our local operations. This is why we place particular importance on integrating both new recruits and employees from companies acquired in the region as quickly as possible in The Linde Group. This also involves familiarising new staff with the values and culture of The Linde Group. As a result, our Corporate Responsibility charter in the Eastern Europe & Middle East region focuses largely on HR development. Within the framework of our training and employee development programmes, we focus on strengthening contacts at regional and at Group level.

### Management development programmes

As part of our Group-wide management training activities, we organise various management development programmes at regional level. These include the Leadership College and Management College programmes, both of which are geared towards bringing together high-potential managers from all over Eastern Europe and providing them with intensive training.

Leadership College was developed for talented employees with some experience in a senior management position at local level and for employees with international career prospects. Both sets of candidates should have completed a university education and possess excellent English language skills. This training programme focuses on further strengthening participants' leadership qualities. Presentations on current regional topics and challenges held by the relevant regional managers give the participants additional insights and momentum. In 2006, twelve employees from the Eastern Europe & Middle East region took part in this training programme.

Management College is aimed at younger, up-and-coming employees (between 25 and 30) and particularly talented employees from operational units in the region. During this programme, participants develop professional management skills and methodologies, and are groomed for future managerial roles.



↳ Left and right: Kazincbarcika gas production plant, Hungary

#### Leadership College:

- Regional training programme focusing on leadership skills
- Three modules in English (each lasting two to three days) held over a period of one year
- Strong practical focus with theoretical background
- Teaching methods include discussions, role plays, exercises, group work, cross-module tasks
- Regular evaluation
- Content includes leadership roles and styles, individual experiences, team leading, motivation, feedback, effective leadership communication, communication levels, setting goals, building relationships, conflict management, conflict resolution, communication processes, change management, employee development

#### Management College:

- Regional training programme focusing on professional management skills and methodologies
- Two modules in English (each lasting two days) held at the same location over a period of one year
- Twelve participants (fixed number)
- Content includes management methodologies, management communication

#### Junior Circle for young talent

The Junior Circle is an HR development scheme run jointly by the three European Regional Business Units (Continental & Northern Europe/Eastern Europe & Middle East/UK & Ireland). Introduced by Linde back in 1996, this scheme targets promising young European talent. Since its inception, Junior Circle has furthered the careers of 177 potential candidates from 20 countries. The candidates are selected on the basis of recommendations from the country in question. In total, around 18 employees join the Junior Circle each year. The main objectives of the scheme are to promote a customer-driven entrepreneurial spirit, foster a sense of teamwork, strengthen creative and conceptual skills and provide experience in an international, intercultural context.

#### Commitment to society

Our Corporate Responsibility charter in Eastern Europe and the Middle East extends beyond internal measures aimed at benefiting our employees and embraces a wider commitment to society as a whole.

In Poland, for example, we help fund the “Prometeusz” foundation for disabled people and low-income families every year. We were presented with an award from this foundation last year in honour of our ongoing commitment.

In Romania, we promote training in the skilled trades by sponsoring welding courses at the National Institute for Welding.

As a supplier of medical gases and equipment, we feel that our role extends beyond the value of our products and services to include a wider contribution to healthcare in general. Hence our involvement in the childhood cancer foundation KRTEK in the Czech Republic. Founded in 1999, this charitable organisation raises funds and heightens public awareness regarding the issues facing children suffering from cancer. These funds support the work of the Paediatric Oncology Department at the University Hospital Brno, dedicated to research for comprehensive cures for infants, children, teens and young adults with cancer.

In Poland, we support the BOLD project (Burden of Chronic Obstructive Lung Disease). Under the umbrella of BOLD, around 2,000 patients with chronic obstructive lung disease were examined in southern Poland in 2006. Similarly in Poland, we were involved in tests to treat newborns suffering from respiratory problems with inhaled nitric oxide in 2007. At the request of medical specialists from various hospitals, we supplied our INOmax® product for this purpose. And we have been working with the Krakow medical emergency centre since 2004. This involves supporting their annual competition between national and international emergency teams through funding, organisational aid and medical talks.

## Our contribution on the environmental and safety front

Many countries in the Eastern Europe & Middle East region would benefit from a higher level of awareness surrounding the importance of environmental protection. As a leading supplier of gases in this region, we see it as our duty to make an active contribution in this area. We achieve this through the smart combination of various efficiency measures at our sites, for example equipping our production locations with recycling facilities and improving plant efficiency.

At all our carbon dioxide (CO<sub>2</sub>) plants in Turkey, for example, improvements to the purification process during CO<sub>2</sub> production allowed us to capture, recycle and reuse 65 percent of the CO<sub>2</sub> previously released into the atmosphere during regeneration. In addition, we retrofitted our Denizli-I CO<sub>2</sub> plant in Turkey with the more environmentally friendly raw natural gas desulphurisation unit in place at our new Denizli-II CO<sub>2</sub> plant.

By limiting the RPM of our forklift trucks in Turkish gas distribution centres, we succeeded in lowering the speed of these vehicles from 22 km/h to 10 km/h. This move not only reduces fuel consumption, but also lowers emissions and increases safety in the handling of gas cylinders.

We were also involved in an environmental project for a supermarket customer in Poland. This involved replacing 400 kilos of ozone-depleting coolant with 350 kilos of an environmentally sound alternative. This significantly reduced the ecological footprint of the cooling facility. This project offers massive potential if the customer decides to roll out the new solution across the entire supermarket chain.

In Serbia, we are using the methane which is present at a five percent concentration in raw CO<sub>2</sub> to generate power at our CO<sub>2</sub> plant in Becej. This involves increasing the methane concentration to 37 percent and using it to power a gas plant that generates one megawatt of electrical energy and 1.2 megawatts of thermal energy. This is sufficient to meet more than one third of our energy requirements at this plant.

At our air separation plant in Nicosia in Cyprus, we improved plant control and thus reduced electrical energy requirements by five percent.

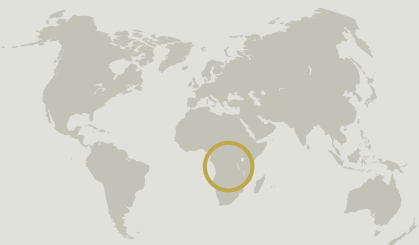
And at various sites throughout the region, we source the water we need for our production processes from wells on our own grounds instead of taxing the municipal water service. We use our own water supply in Turkey (Bursa, Narcosis), the Ukraine (Dnepropetrovsk) and at various sites in Serbia and Croatia.

In addition, we have introduced waste management systems at many locations throughout the region, including Turkey, the Czech Republic and Croatia. We are working with specialised external service providers to collect and recycle waste.

Last but not least, we are working hard to help establish and align safety standards – particularly in emerging economies.

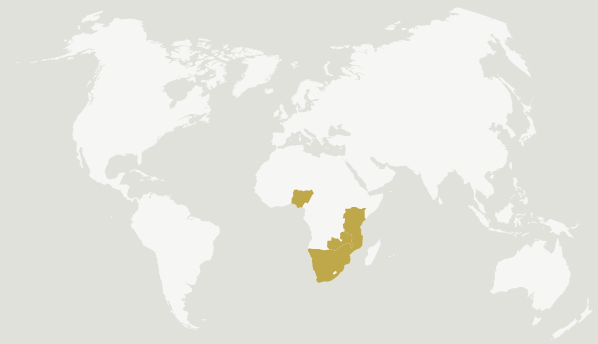


Africa Regional Business Unit // Social commitment plays a key role in our Corporate Responsibility activities in this region. ↳ *Sand dunes in the Namib Desert, Namibia*



Our Community Involvement Programme fosters sustainable development in sub-Saharan countries. One example of this is our support for the Tsalapeng shelter for street children near Pretoria, South Africa.

# AFRICA



*Africa is the second largest continent in the world after Asia, and home to around 924 million people of the most varied cultural origins. Establishing operations in Africa calls for a special sense of responsibility towards the people, communities and environment in this region. The main focus of our Corporate Responsibility here is on social commitment, which actively involves our employees. Health is another extremely important topic. Our Africa Regional Business Unit covers our gases activities south of the Sahara.*

>> The Africa Regional Business Unit includes the following countries: Botswana/Kenya/Malawi/Mozambique/Namibia/Nigeria/Zambia/Zimbabwe/South Africa/Swaziland/Tanzania/Uganda.

>> EMPLOYEES<sup>1</sup>: TOTAL 3,734/FEMALE 22 %/MALE 78 %

>> BOARD MEMBER RESPONSIBLE FOR RBU: KENT MASTERS

>> RBU MANAGER: TJAART KRUGER

>> REVENUE (€ MILLION)<sup>2</sup>: 252

>> MARKET SHARE: > 45 %

>> TOP 3 COUNTRIES REVENUE (€ MILLION)<sup>2</sup>:

SOUTH AFRICA: 231

KENYA: 7

NIGERIA: 4

>> MAIN PRODUCTION PLANTS:

AIR SEPARATION PLANTS: 14

CO<sub>2</sub> PLANTS (63 KTPY<sup>3</sup>): 6

<sup>1</sup> As of 30 June 2007. Male/female ratio calculated based on total number of Linde Group employees in the region.

<sup>2</sup> H1 2007 (as of 30 June 2007), discounting revenue generated through joint ventures.

<sup>3</sup> Total plant capacity expressed in kilotonnes per year.



## Our gases business in Africa

We are mainly represented by the former BOC group member African Oxygen Limited (Afrox) in Africa. Founded in 1927, Afrox is now market leader for gases and industrial welding products in sub-Saharan Africa. In addition to tank deliveries and on-site facilities for larger customers, the company's portfolio includes cylinder gases, welding products, liquefied petroleum gas (LPG), medical gases, specialty gases, food-grade gases and safety products and services. The Linde Group is investing over € 60 million in a programme to expand its footprint in southern Africa over the next few years. This will include constructing five new air separation plants and a carbon dioxide recovery unit, as well as modernising our production facilities in Brits and Germiston (both South Africa). The programme will ensure that we are ideally equipped to capitalise on the sustained growth experienced in this region.

## Afrox listed on South African SRI Index

For the third year running, Afrox has qualified for listing on the Socially Responsible Investment (SRI) Index, maintained by the Johannesburg Securities Exchange (JSE). In 2006, 58 of South Africa's 150 leading companies were evaluated and ranked according to the sustainability of their activities by economic, environmental and social criteria (see also page 029).

## Corporate governance at Afrox

Afrox and its group members in South Africa are entirely committed to responsible corporate governance and controls.

The management fully endorses the principles of the Code of Corporate Practices and Conduct as recommended by the 2002 King Report on Corporate Governance (King II Report), and also guarantees stringent compliance with all laws applicable to the company. This includes the requirements for companies listed on the JSE and Namibian Stock Exchange.

We regularly review our corporate governance structures and make adjustments where appropriate to ensure continuity of governance practices.

The Afrox Executive Board manages operations and therefore has full responsibility for the company's performance, which is evaluated at regular intervals. The Board delegates certain tasks to various committees, including:

- Audit Committee
- Management Resources Committee
- Governance and Nominations Committee
- Transformation Committee

An efficient and effective risk management system is essential to lay the foundation for sustainable growth. Afrox, therefore, has a system in place that covers strategic, operational, legal, financial, marketing, SHEQ, technical, HR and other risks.

You can find more information on corporate governance in the Afrox Annual Report or on the Internet at

→ [www.afrox.com](http://www.afrox.com)

## Responsibility in the community

Many people in Africa have little or no income, and have to contend with poor living conditions, lack of clean water and food shortages. They are exposed to increased risk of disease, and medical care is often insufficient. This situation is further compounded by the widespread lack of education and training opportunities.

As a major company with varied business interests in many parts of Africa, Afrox has always been committed to active involvement in local communities. Our future is closely linked to sustainable development in the African communities we are a part of.

Our CR commitments here include:

- Broad Based Black Economic Empowerment (BBBEE)
- A social commitment programme
- A donations programme
- Support for a vocational welding school
- Support for the education and training of underprivileged students



↳ Left: Afrox gas centre in Germiston, Gauteng, South Africa

↳ Right: Bakery at Tsalapeng shelter for street children, Pretoria, Gauteng, South Africa

### Broad Based Black Economic Empowerment (BBBEE)

BBBEE is the South African Government's policy that aims to empower groups previously disadvantaged under the former apartheid regime by giving those groups access to economic opportunities that were not available to them in the past. This far-reaching programme also promotes numerous measures dedicated to this cause. The policy is supported and promoted by the government and various legislative codes. Balanced scorecard evaluation of companies' headway under BBBEE is an important part of the 2004 BBBEE law, for instance.

As a responsible company, Afrox embraces the principles of the BBBEE initiative. These include supporting disadvantaged groups through:

- Company ownership and governance opportunities
- Management positions
- Employee development schemes; an equal opportunities recruitment policy
- The establishment and development of suitable companies
- The selective purchase of goods and services
- Corporate social investment (CSI) and donations

An outstanding example of the ongoing transformation of companies under the BBBEE programme was the sale of our remaining shares in the Life Healthcare Group (previously Afrox Healthcare) to a BBBEE consortium in 2006. This was one of the largest ever BBBEE transactions in South Africa's industrial sector.

In 2006, Afrox received a "BB" ranking for its activities from the Empowerdex economic empowerment ratings agency, taking 57th place among the companies with the best BBBEE performance.

### Community Involvement Programme

Afrox established its Community Involvement Programme (CIP) as far back as 1995. This is the core of our social activities and involves support and partnerships for human aid.

Afrox employees are the driving force behind these initiatives, showing great commitment and initiative in establishing pro-

grammes and campaigns in their local communities. The company provides them with financial backing.

Employees have founded CIP committees for the areas surrounding the various Afrox locations in South Africa and nine other African countries. These committees identify specific requirements in collaboration with the local communities and target their relief operations accordingly. The fundamental criteria for partners here is that they must be reputable, not-for-profit charitable organisations focusing on supporting disadvantaged children (see also overview page 087).

Employee commitment to our CIP has increased enormously over the last few years. Around 40 percent of our employees are now involved in the CIP, supporting 71 relief projects in 2006 and thereby helping around 8,000 children.

### Bumbanani Day

Bumbanani Day is the highlight of our CIP, celebrated annually at all locations with employee-driven CIP projects. "Bumbanani" is a Zulu word meaning "build each other". On a selected date in October, Afrox employees enjoy special activities with their CIP children, such as excursions, music events, visits, picnics or games. Bumbanani Day has now become an established institution across South Africa, symbolising Afrox's overall social commitment.

### Donating for the future

In accordance with the Afrox donations policy, we earmark a certain percentage of our profit after tax for social purposes. The recipients are selected by a donations committee, presided over by the CEO of Afrox. This committee meets on a quarterly basis and advises on the most worthy causes. In keeping with its motto "investing in the future", this scheme focuses in particular on "our children, their education and the environment". Projects range from support for primary and secondary schools through preparation courses for future university candidates from socially disadvantaged backgrounds to grants for students in higher education.

### Overview with examples of charitable institutions supported within our CIP:

- Orphanages/shelters for street children/care centres for children in need and abuse victims
- Schools, nurseries, aftercare organisations
- Centres supporting AIDS orphans/babies and children living with HIV/AIDS
- Homes for mentally and physically disabled children
- Children's wards in provincial hospitals

## Supporting our employees

At Afrox, we pursue a holistic and proactive strategy to ensure the physical, mental and financial wellbeing of our employees. We encourage employees to take an active stance in this area through our employee support programme, which we offer in partnership with an external service provider. This confidential counselling service is available to all employees and their families at all times. It covers a wide range of personal issues, from legal advice and financial planning to family, health and employment topics. It also offers help for drug abuse.

This service is extremely popular, with almost a third of our employees taking advantage of it so far.

### HIV/AIDS

Over 60 percent of the world's HIV/AIDS victims now live in sub-Saharan Africa. Almost every family is affected by the disease in some way and most have to deal with its consequences without any state support. Against this background, we have a particular

responsibility to contribute to relieving the suffering. HIV/AIDS concerns us all.

Alongside our public commitment to combating the HIV/AIDS problem as part of our CIP activities described above, we also focus particularly on our own employees here. In 2003, we adopted an HIV/AIDS policy at Afrox and implemented a comprehensive programme. Since then, 70 percent of our employees have already taken part in internal HIV/AIDS education. A support programme also offers professional advice to staff and their families, and these measures are complemented by test campaigns. Employees with HIV/AIDS can register themselves under our disease management scheme. Afrox then provides care and support in collaboration with external partners and pays for the costs of antiretroviral treatment where required.

Afrox is confronting HIV/AIDS. We are attempting to increase awareness of this disease among our employees and enable them to take responsibility for preventing infection in every way possible.

**Co-sponsoring a vocational welding school** // For years now, Afrox has been cooperating with two other companies to sponsor a vocational welding school in Richards Bay, in the South African KwaZulu-Natal province. The school trains its students in welding procedures, and last year also equipped 222 people from the local community with welding systems, some of which were provided by Afrox.

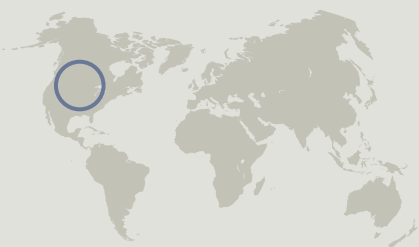
**Help the helper** // Thandeka Ncinane runs the Ethambeni children's home near George, in the Western Cape province of South Africa. She mainly takes in and looks after children who have been abused or maltreated.

Suddenly, she found herself in urgent need of help. In 2006, she lost her house following a cable fire and was rendered penniless overnight. When this reached the ears of the management team at Afrox, they immediately offered a considerable sum for emergency relief efforts. The local CIP committee also took action, collected further donations and involved a nearby construction company in the aid work. Voluntary construction workers also offered assistance, so Thandeka Ncinane's house was rebuilt within just two months. This has enabled her to resume her important charitable role and focus all her energies on the children in her care.

**Clean drinking water for Kalesonia** // Afrox contributed around € 6,000 from its donation programme to enable the small South African community of Kalesonia to install a patented well. The well is designed as a playground roundabout. The roundabout operates a pump as it turns, transporting clean groundwater from deep within the Earth through a wellhead to a reservoir up to seven metres above ground. The natural gradient provides the pressure needed to propel the fresh drinking water through a pipeline to taps, thus supplying the local inhabitants. This innovative system is considerably more effective than traditional hand pumps. Sixteen rotations per minute can produce up to 1,400 litres of water per hour, for example.

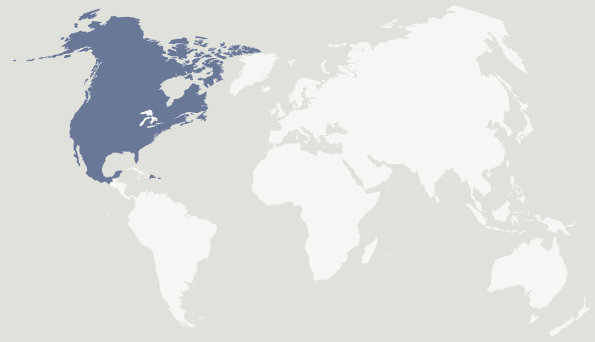


North America Regional Business Unit // Our Corporate Responsibility agenda here centres on maximum safety for our employees, customers and neighbours. ↪ *Carrizo Plain, salt lake in Southern California*



Our wide-ranging safety management programme in North America includes safe and reliable distribution of cylinder and liquid gases by our HGV fleet. Multiple awards bear testimony to the success of our safety focus.

# NORTH AMERICA



North America is part of the American double continent, in which the US is the main player. The US often plays a defining role in setting the political, economic and social stage for many other regions in the world. In fact, the US leads the way in many areas. Safety, for example, is particularly important in the US, which is why it features so prominently in our Corporate Responsibility strategy for North America.

>> The North America Regional Business Unit includes the following countries: US/Canada/Mexico/Dominican Republic/Puerto Rico.

>> EMPLOYEES<sup>1</sup>: TOTAL 6,594/FEMALE 14 %/MALE 86 %

>> BOARD MEMBER RESPONSIBLE FOR RBU: KENT MASTERS

>> RBU MANAGER: PAT MURPHY

>> REVENUE (€ MILLION)<sup>2</sup>: 1,057

>> MARKET SHARE: 13 %

>> TOP 3 COUNTRIES REVENUE (€ MILLION)<sup>2</sup>:

US: 916

CANADA: 113

PUERTO RICO: 16

>> MAIN PRODUCTION PLANTS:

AIR SEPARATION PLANTS: 42

CO<sub>2</sub> PLANTS (2,380 KTPY<sup>3</sup>): 33

HYDROGEN PLANTS: 14

<sup>1</sup> As of 30 June 2007. Male/female ratio calculated based on total number of Linde Group employees in the region.

<sup>2</sup> H1 2007 (as of 30 June 2007), discounting revenue generated through joint ventures.

<sup>3</sup> Total plant capacity expressed in kilotonnes per year.

## The world's largest gas market

Our North America Regional Business Unit comprises the US, Canada, Mexico, the Dominican Republic and Puerto Rico. Valued at just over € 13 billion in volume, the North American gas market is the largest in the world and accounts for a third of all global business involving industrial and medical gases. With a market share of around 13 percent, The Linde Group has a sound foothold here. We restructured our gas activities in line with the BOC merger, and further optimised our product portfolio following the sale of parts of our US cylinder gas business, completed in 2007. In future, we will increasingly be turning our attention to customer segments offering greater application depth. We will be focusing on liquefied gas and on-site facilities for high-volume customers as well as specialty and medical gas customers.

In the US, our on-site business for chemical and oil customers is particularly concentrated in the La Porte and Clear Lake areas of Texas and in Toledo and Lima in Ohio, in the northeast US.

The Linde Group constructed the world's largest air separation plant in Cantarell, Mexico, for the PEMEX (Petroleos Mexicanos) crude oil company, and is also plant operator.

## Safety first

In accordance with the Group safety, health, environment and quality (SHEQ) policy (see page 048), we undertake to ensure the safety of our employees, customers and neighbours at all times in our daily activities, in North America as elsewhere. This strong safety awareness lies at the base of a wide range of activities, which have also gained recognition from our stakeholders.

## Safety-aware behaviour

In the North America region, we have been holding regular workshops since 2005 to sensitise our employees to all aspects of occupational safety. Here we address safety issues with our employees to preempt risks to people or the environment. This proactive method underscores our new Group guidelines, "Leading in SHEQ".

During the reporting period, we rolled out our new Group-wide SHEQ policy across the North America region and provided compliance training to every employee. Our visible leadership strategy involves our managers setting an example in following our safety guidelines, contributing to a significant reduction in accident rates.

## Positive resonance

We have continuously improved our safety statistics over the last five years. The North American Compressed Gas Association (CGA) has acknowledged our outstanding performance in this area, awarding BOC Gases the prestigious Leonard Parker Pool Safety Award in 2006 (see page 043).

CGA's overall appraisal also takes account of our efforts to decrease personal injuries that must be filed with the safety authorities. We achieved the largest improvement in this area. CGA's assessment extends over a five-year period. We also received this award in 2002 (for our safety performance in 2001). Two consecutive wins bears clear testimony to the long-term nature of our commitment to safety in the US.



↳ Left and right: Driver and his truck for liquefied gas transport at the Summit site, New Jersey, USA

We are also proud to have won the CGA's Fleet Safety Award for the second time in a row. This went to BOC in 2006 for the outstanding safety of its cylinder gas fleet in the category for over three million miles driven. It is awarded to the member company with the lowest number of traffic incidents that must be filed. Comprising around 200 heavy goods vehicles, our cylinder gas fleet clocked up a total of approximately 6.4 million miles in the US and Canada that year.

These road safety successes are a consequence not only of our strict safety standards, but also of the professional attitude of our drivers. In the US and Canada alone, they cover over 80 million miles every year, transporting both cylinder and liquefied gases and completing around 1,500 customer deliveries daily.

Around 200 BOC drivers have already received recognition from the National Safety Council for achieving at least ten years or 25,000 driving hours without accident. A small number even attained 20 or 30 years of accident-free driving, and eight BOC drivers have made the National Private Trucking Council (NPTC) Driver Hall of Fame. To join this elite circle, truckers must have at least two million miles, 20 years or 50,000 hours of consecutive driving without a preventable accident under their belt. BOC has more drivers in the Hall of Fame than any other NPTC member company (see also text box on the right).

**Eighth BOC truck driver enters Hall of Fame** // In May 2006, John Tedford became the eighth BOC truck driver to reach the North-American NPTC's Driver Hall of Fame. Employed at the gas depot in Gonzales, Louisiana, Tedford has almost 40 accident-free years as a truck driver behind him, and has safely covered over 3.4 million miles transporting oxygen, nitrogen, argon and carbon dioxide in several southern US states. This is equivalent to 140 journeys around the world. For ten years now, he has also been putting his considerable trucking experience to good use by training employees in safe driving for our company.

#### Handling hazardous substances

Even with the strictest safety standards, it is impossible to rule out potential hazards in the manufacture, transport and actual use of gases. To ensure we are fully equipped for all eventualities, we have established a 24-hour Hazardous Incident and Emergency Response Team (HIRT) in North America. If a hazardous incident occurs, HIRT team members help ensure accurate assessment of the situation and initiate appropriate countermeasures. They are trained to deal with almost any type of gas leakage and provide safety information to support fire and rescue service operations. Our HIRT teams also offer safety training on the proper handling of hazardous substances to other employees, customers and local emergency service teams.



**Linde wins CGA environmental awards //** Linde won the US Compressed Gas Association (CGA) award twice in succession for best environmental performance (in 2005 and 2006). This award recognises industrial gas companies that make a significant contribution to protecting the environment. We received the 2006 award in March 2007 at the CGA annual meeting in Florida for the development of our refillable ECOCYL® gas cylinder. This small specialty gas container increases safety and efficiency for customers previously reliant on disposable gas cylinders for calibration purposes, and also reduces hazardous waste by eliminating empty containers that have to be disposed of.

We received the 2005 award for best environmental performance in April 2006 in acknowledgement of our work to retrofit and modernise our air separation plant in the City of Industry, California. The move significantly increased plant efficiency and capacity, while reducing energy consumption. Since the conversion in January 2005, the local energy supplier, Pacific Gas & Electric, has cut its CO<sub>2</sub> emissions by around 1.8 million kilograms.

## Economic and environmental responsibility

Our strong position in the North America region provides us with an excellent foundation for future growth in this key market. However, to ensure sustainable economic growth, it is vital for our company to treat both cultural and natural resources responsibly and to meet the challenges of climate change and environmental protection.

We have a responsibility to develop solutions for our customers that help them step up to today's environmental challenges – whether that means ensuring clean air and water or producing green fuels.

### **H<sub>2</sub> filling stations improve North American infrastructure //**

In preparation for the BMW CleanEnergy World Tour, Linde delivered three liquid hydrogen filling stations to BMW in the US in autumn 2006. Two of these are stationary units, installed in California. A third, mobile, filling station will accompany the two-year BMW CleanEnergy tour through the US and refuel the BMW Hydrogen 7 vehicles.

We also provided another H<sub>2</sub> filling station for the BP Group in Taylor, Michigan, inaugurated by the petroleum company in a special ceremony in October 2006. This station fuels a fleet of Ford Focus fuel-cell vehicles and several Ford minibuses with internal combustion engines, used for a shuttle service at Detroit Metro Airport. The project was sponsored by the US energy authorities.

Our activities here are gradually helping to establish a hydrogen infrastructure in North America, harnessing this green energy carrier to lay the foundations for zero-emission, sustainable mobility in the future.

## Protecting resources and the environment with hydrogen

Hydrogen (H<sub>2</sub>) plays a key role in our environmental efforts. It is essential both in producing desulphurised fossil fuels and as a direct green source of energy that is fit for the future.

Drawing on decades of experience, The Linde Group develops hydrogen supply systems to the highest standards of safety and reliability that are designed to meet individual customer requirements. In 2006, we constructed three large hydrogen plants in the US with a total capacity of around five million standard cubic metres per day. These are located at refineries in Toledo and Lima (both Ohio) and Salt Lake City (Utah). The hydrogen generated is used by various petrochemical companies to produce desulphurised fuels, meeting the ever tighter environmental regulations in the US.

We are also involved in several projects in North America using hydrogen as an alternative energy carrier. As part of our partnership with the automotive manufacturer BMW, for instance, we provided support for the North American launch of the hydrogen-powered BMW Hydrogen 7. This limited-edition model was unveiled during the BMW CleanEnergy World Tour in 2007. We supplied the liquid hydrogen required and provided safe, innovative mobile refuelling facilities.



↳ Left, centre and right: Employees at Murray Hill site, New Jersey, USA

This tour took BMW and Linde through several US cities. We kicked off in March in San Antonio, Texas, where the National Hydrogen Association (NHA) was holding its conference – the most important hydrogen event in the US. Alongside the BMW Hydrogen 7, we fuelled vehicles from Mercedes Benz, Honda, Toyota, GM and Volkswagen with both gas and liquid H<sub>2</sub> (see also text box page 093). Linde was the exclusive supplier of hydrogen at this conference.

We also put our hydrogen expertise to good use in Vancouver, Canada, at the country's leading Hydrogen & Fuel Cells 2007 (HFC) event in April this year. Here we were responsible for filling the fuel-cell vehicles with gaseous hydrogen from our nearby Pacific Spirit Station. This 350-bar filling station is part of the British Columbia Hydrogen Highway™, which connects Vancouver and Whistler over a distance of 115 kilometres.

### Corporate environmental protection

Our responsibility for sustainable environmental protection involves developing solutions to improve not only our customers' processes, but also our own. We place particular importance on achieving the greatest possible reliability and efficiency in our plants here. This ensures totally dependable and cost-effective customer supply on the one hand, and protects natural resources on the other, by using energy as efficiently as possible.

Power consumption is an important factor in the production of industrial and medical gases. We continually strive to reduce electricity consumption in our production facilities, and thereby improve our indirect carbon dioxide emissions. We have already optimised numerous air separation plants in terms of capacity and efficiency, and have been able to reduce our indirect CO<sub>2</sub> emissions by millions of kilos by making substantial cuts in our power drain.

We have also started to systematically replace the ozone-depleting fluorochlorohydrocarbon-based coolants in our air separation plants with alternative, environmentally friendly agents. We aim to complete this process by 2009, again contributing to long-term environmental protection.

### Social commitment as part of Corporate Responsibility

North America is one of the most highly developed and advanced regions in the world. Traditionally, many companies show strong social commitment, and we also place great emphasis on our social responsibilities in this region. Our activities include supporting the ill and disadvantaged and investing in professional training for young people in North America.

Geographically, our relief projects here are closely linked to our business operations, so we concentrate on the communities surrounding our production facilities, for example. Our employees play an important role in implementing these projects, both directly and in cooperation with charitable organisations. We encourage and motivate them to contribute their personal commitment, and reward their voluntary activities by matching their donations or sponsorship funds.

#### United Way

United Way is our corporate donations programme in North America. Each year, we conduct a United Way fundraising campaign, open to all our employees in the US. The Linde Group doubles the donations collected and contributes them to selected relief projects.

The 2006/2007 United Way campaign was the first national project in which we processed all donations online via our e-mail system. Altogether, we collected over 300,000 US dollars for social causes.

Within our United Way programme, our employees also volunteer all year round for a wide range of relief projects. These include collecting food, school materials, clothing and baby items and distributing them to families in need, for example.

### Habitat for Humanity

We help people in need wherever we are based. This includes supporting the charitable Habitat for Humanity organisation, for example, which focuses on providing appropriate and affordable accommodation for those facing hardship. In cooperation with the organisation's local branches, we supported two Habitat housing projects in 2006/2007 – in Cartersville, Georgia, and Toledo, Ohio. We constructed gas production plants in both locations within the same timeframe, so are involved in the industrial infrastructure of these communities.

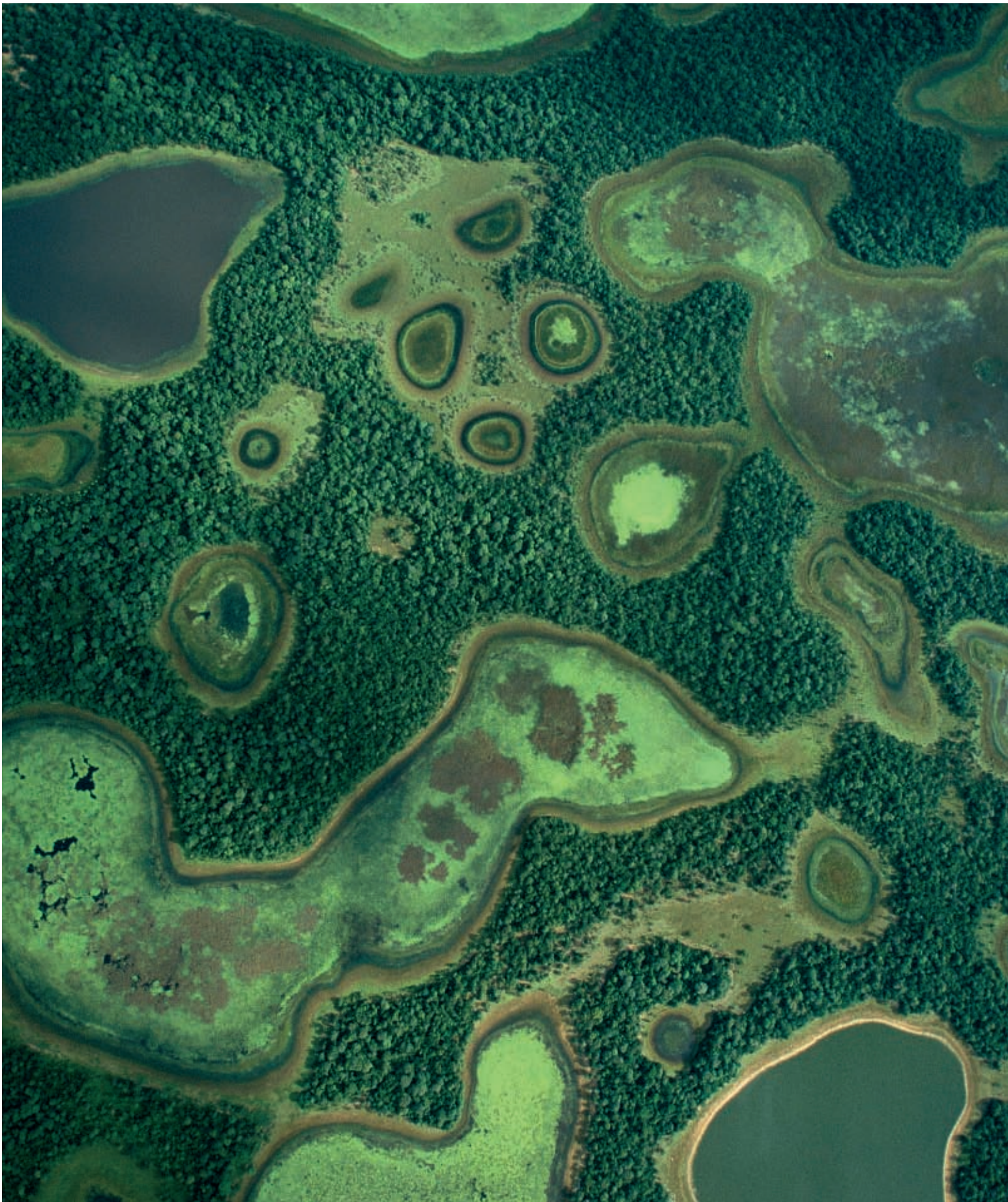
#### Donation and relief projects in the US, 2006/2007

##### Cash donations:

- United Way programme: USD 300,000
- American Red Cross (Hurricane Katrina Fund): USD 118,000
- Hurricane Katrina aid for affected employees: USD 100,000
- Habitat for Humanity project: USD 100,000

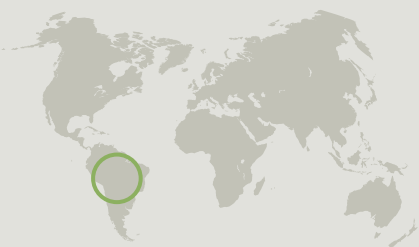
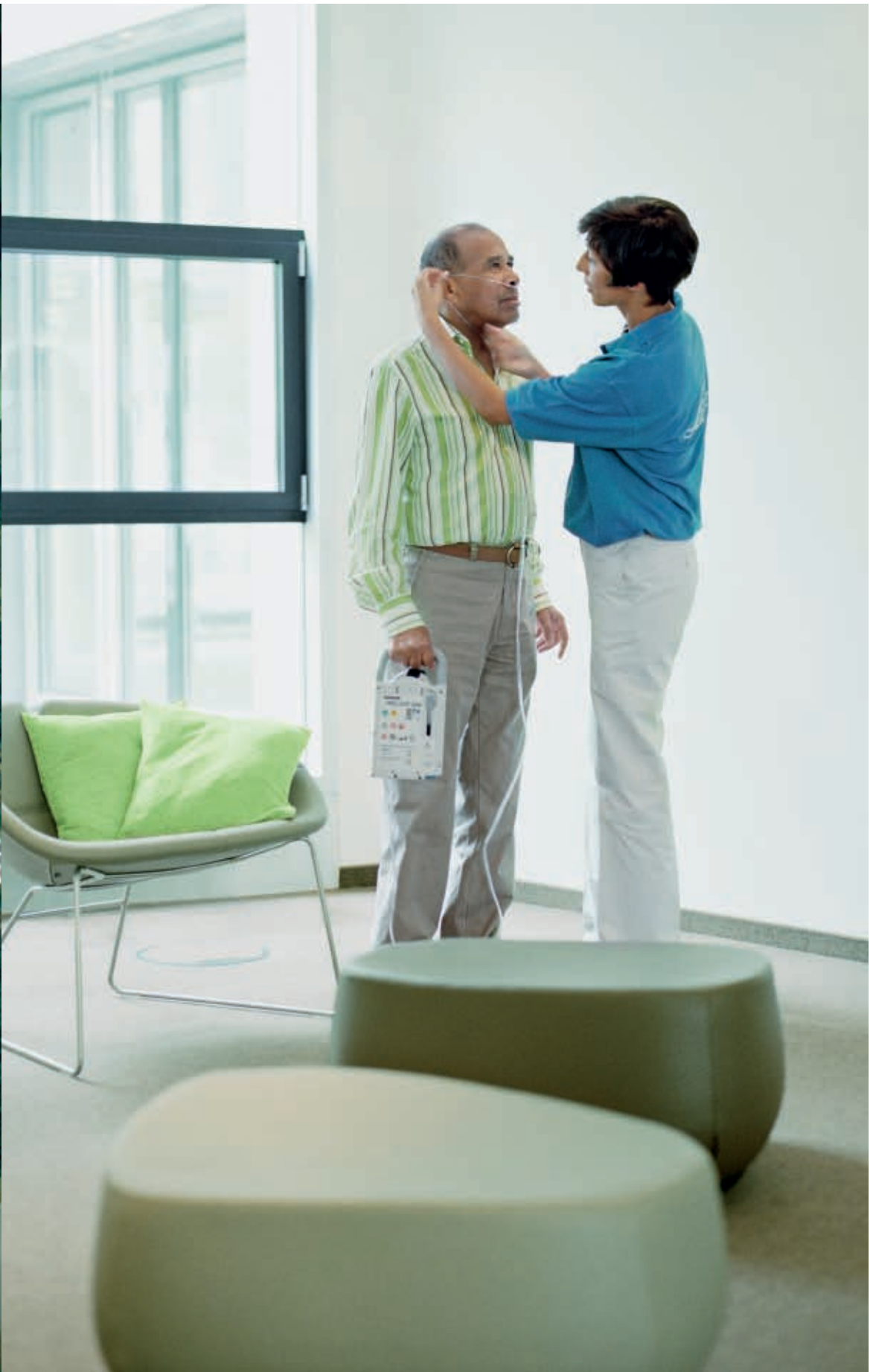
##### Sponsorship for education/training:

- Support for educational institutions: USD 100,000
- Reimbursement of employee higher education fees: USD 488,000



South America Regional Business Unit // We extend our comprehensive healthcare expertise to provide support for public health in the wider community in this region.

↳ *Pantanal flood plain, Mato Grosso, Brazil*



We are strongly committed to general welfare here, providing free support for respiratory patients facing hardship, for example. Our nature protection activities include participating in national rainforest projects.

# SOUTH AMERICA



South America is the fourth-largest continent on Earth, with a population of approximately 355 million. After Asia and Eastern Europe, South America is also one of the world's most burgeoning growth regions. However, standards of living vary considerably throughout South America. Which is why acting responsibly is so important for an international technology company such as The Linde Group. Our Corporate Responsibility agenda in this region primarily revolves around social commitment, education, health and the environment.

>> The South America Regional Business Unit includes the following countries: Argentina/Brazil/Chile/Columbia/Ecuador/Peru/Uruguay/Venezuela/Aruba/Curaçao.

>> EMPLOYEES<sup>1</sup>: TOTAL 2,290/FEMALE 24 %/MALE 76 %

>> BOARD MEMBER RESPONSIBLE FOR RBU: KENT MASTERS

>> RBU MANAGER: CLEMIS MIKI

>> REVENUE (€ MILLION)<sup>2</sup>: 243

>> MARKET SHARE: 23 %

>> TOP 3 COUNTRIES REVENUE (€ MILLION)<sup>2</sup>:

BRAZIL: 97

VENEZUELA: 37

CHILE: 36

>> MAIN PRODUCTION PLANTS:

AIR SEPARATION PLANTS: 20

CO<sub>2</sub> PLANTS (154 KTPY<sup>3</sup>): 13

HYDROGEN PLANTS: 5

<sup>1</sup> As of 30 June 2007. Male/female ratio calculated based on total number of Linde Group employees in the region.

<sup>2</sup> H1 2007 (as of 30 June 2007), discounting revenue generated through joint ventures.

<sup>3</sup> Total plant capacity expressed in kilotonnes per year.

## Firm foothold in a flourishing region

The South American economy has now achieved five consecutive years of growth – as has the market for industrial and medical gases, valued at around € 1.8 billion. With a market share of around 23 percent, The Linde Group is the second-largest gas supplier in the region. We are represented in a total of ten countries here by our AGA and BOC brands. As the largest gas market in the region, Brazil alone accounts for around 40 percent of our sales in South America. Our main customers in this region are from the metal processing, (petro)chemical and paper and pulp industries, although we increasingly also supply healthcare and food industry customers. Cylinder deliveries accounts for the lion's share of sales here (46 percent), followed by on-site systems (32 percent) and the healthcare sector (22 percent). We manage operations in South America at regional level, under the umbrella of regional guidelines and strategies. Although we do not have individual country managers here, we place great value on a strong local presence.

## Commitment to society

The cultural norms, rules and regulations vary significantly from one country to another in this region. Union regulations and employment law are good examples of this. However, despite these differences, we feel the same sense of responsibility across all countries. Hence we pursue similar Corporate Responsibility programmes in all of our South American countries, for example, focusing in particular on social commitment. Several stakeholder groups have commended our work in this area with various awards last year.

### Helping people in need

Despite the overall economic upturn, the poverty gap in many South American countries remains very large. We help to redress this situation through several local relief projects, often drawing on the direct involvement of our employees.

In 2006, for example, we launched the “Dibuja una sonrisa” (“Give us a smile”) aid campaign in Argentina, led by our employees. Staff from all subsidiaries in that country helped collect food and clothes, which we then donated to a local welfare group. We have also run similar support programmes together with our employees in Brazil. In Uruguay, food and clothing collections in 2006 went to flood victims, along with cash donations.

### **BOC Venezuela supports International Women's Club //**

We support the Valencia-based International Women's Club with cash donations in Venezuela. This non-profit association was founded 50 years ago by a group of 45 foreign women whose husbands were managers in multinational companies, and has been looking after people in need and supporting good causes ever since. The women founded a home for abandoned children, which offers them care, board and lodging. The private initiative also helps children and young people achieve self-sufficiency through training opportunities, and supports three homes for the elderly and four schools. Money from donations and charity events is used to renovate school buildings, build laundry facilities at homes for the elderly, pay teachers and buy food for the children's home. Through these activities, the Valencia International Women's Club sets an example of social commitment in Venezuela that has been supported by BOC for many years.

Also in Venezuela, we participated in a charity event at the Caracas Children's Museum in July 2006. BOC used this occasion to present the acting director of the museum with a donations cheque. The money will go towards the museum trust, which promotes education in schools, enabling pupils to get involved in creative projects that extend beyond the defined syllabus.

### Awards won by Linde in South America in 2006

→ **Brazil: "Great Place to Work Award"**

In Brazil, we were among the top 100 companies selected by the "Great Place to Work" institute as having the best work environment.

→ **Columbia: "Environmental Excellence District Award"**

In Columbia, the Bogotá environmental authorities awarded us a prize for the best environmental performance.

→ **Venezuela: Recognition by International Women's Club**

In Venezuela, we received official recognition from the International Women's Club, headquartered in Valencia, for our continued support for this charitable organisation.

### Improving education in South America

As well as supporting charitable organisations that help people meet their basic needs, we are also working to further education in South America.

In March 2007, we signed a general cooperation agreement with the research and development foundation at Simón Bolívar University (Fundación de Investigación y Desarrollo de la Universidad Simón Bolívar – FUNINDES-USB) in Caracas. Our first project under this long-term collaboration arrangement will be to establish a welding centre to train young students from the Caracas area. We are also involved in similar partnerships with three different technical schools and universities in Ecuador.

To help socially disadvantaged people acquire IT skills, we launched a programme in several South American countries which involves us donating used PCs from our offices to local community services or charitable organisations. This enables municipal and other educational bodies to train school children, young people and adults on how to use computers. In 2006, we ran these PC donation initiatives for schools and community services in Brazil, Chile, Ecuador, Columbia and Venezuela, for instance.

### Commitment to healthcare

Linde is a major provider of medical gases and equipment in South America. We supply hospitals, medical centres and practitioners, also offering innovative homecare solutions such as home oxygen therapy for patients with respiratory diseases. Our Healthcare division already generates 22 percent of total sales in the South America region and remains on a growth path here.

As part of our Corporate Responsibility charter, we also see it as our duty to use our comprehensive medical expertise to promote healthcare in South America. This involves participating in and sponsoring medical conventions, for example. In 2006, we took part in the national anaesthesia congress and a neonatology<sup>1</sup> convention

in Brazil and sponsored a convention on respiratory therapy in Venezuela. In Ecuador, we offer respiratory patients in need discounts on our homecare solutions, plus complimentary support in some cases. And in Argentina, we provide the society of anaesthesiology with smaller quantities of our medical gases free of charge for training purposes.

### Protecting the environment in South America

Environmental awareness is not yet high on the agenda of some South American countries. Large-scale deforestation of the Amazon rainforests is evidence of this, for example. These "green lungs" have a significant impact on the world's climate, not only due to the fact that they produce vital oxygen through photosynthesis, but also because they bind the greenhouse gas carbon dioxide. In 2006, our efforts to raise public awareness of this issue included participating in an environmental book project in Brazil. "The Jundiá River Basin" describes and illustrates the area along the river near Sao Paulo. It particularly focuses on the area's settlement, recently initiated environmental measures, and its significance as a recreational area for the inhabitants in and around Sao Paulo. We reserved some of the copies of this book for various schools and university libraries.

In Venezuela, we are supporting the "Asociación Civil Amigos del Cerro Casupo" (ASOCASUPO) association, which focuses on preserving the large recreation area near Valencia. The area in question is 170 hectares of mountainous countryside boasting untouched nature and a wide range of flora and fauna. Located in Western Venezuela, this area is currently one of the most popular destinations for Venezuelans who enjoy the peace and quiet of nature.

We also sponsor environmental management students at the National Force Experimental University (UNEFA) in Venezuela. The students lead guided tours through the rainforest, for example, with the aim of raising general awareness of environmental issues and encouraging participation in environmental projects.

<sup>1</sup> The term "neonatology" describes both the study of (human) newborns and the branch of paediatrics concerned with the medical care of newborns (often including premature babies).





↳ Left: Supporting leisure activities for children with cancer in Caracas, Venezuela

↳ Right: Environmental management student on a tour through the rainforest in Venezuela

Looking at environmental protection within our company, we have implemented both efficiency programmes to save electricity and water and waste recycling programmes at various production locations in the region, including Columbia, Argentina, Venezuela, Ecuador and Brazil.

#### Other healthcare projects:

##### **Brazil:**

- Support for “Doutores da Alegria” (doctors of happiness), a national foundation helping children in hospital to cope better with their illness, for instance with games and shows.
- Support for the “Irma Dulce” trust. This trust runs five hospitals and three care homes in Bahia, which are amongst our largest customers in the North West. We are sponsoring one of the care homes for children.
- Support for APAE, a local foundation in Rio de Janeiro that looks after children with mental disabilities.

##### **Uruguay:**

- Support for the “Peluffo Giguens” foundation in Montevideo, which focuses on technical, financial and emotional help for children with cancer. The foundation organises major national donation campaigns three times a year, for example, which are also televised.

##### **Venezuela:**

- Support for healthcare activities run by associations committed to children with cancer, and Alzheimer’s patients.



South & East Asia Regional Business Unit // This region reveals extraordinary geographic, market and cultural diversity.

↳ *Atolls in the Maldives archipelago*



Our Corporate Responsibility measures here reflect this exciting diversity, with activities ranging from social commitment through occupational safety to environmental protection. We are making ongoing efforts to reduce energy consumption and increase efficiency in our production plants, for instance.

# SOUTH & EAST ASIA



*South & East Asia is home to some of the fastest growing economies in the world. Our activities in this corner of the globe, with the exception of China, Taiwan and Japan, are managed by our South & East Asia Regional Business Unit. This is the most diverse of all our regions – both in terms of cultural differences as well as market dynamics and size. It seems fitting, therefore, that diversity is also the central theme that runs through our Corporate Responsibility activities in South & East Asia.*

>> The South & East Asia Regional Business Unit includes the following countries: Bangladesh/India/Thailand/Malaysia/Singapore/Indonesia/Philippines/Pakistan/South Korea/Vietnam.

>> EMPLOYEES<sup>1</sup>: TOTAL 4,547/FEMALE 15 %/MALE 85 %

>> BOARD MEMBER RESPONSIBLE FOR RBU: DR ALDO BELLONI

>> RBU MANAGER: SANJIV LAMBA

>> REVENUE (€ MILLION)<sup>2</sup>: 292

>> MARKET SHARE: 29 %

>> TOP 3 COUNTRIES REVENUE (€ MILLION)<sup>2</sup>:

THAILAND: 74

SOUTH KOREA: 53

SINGAPORE: 42

>> MAIN PRODUCTION PLANTS:

AIR SEPARATION PLANTS: 35

CO<sub>2</sub> PLANTS (318 KTPY<sup>3</sup>): 10

LARGE H<sub>2</sub> PLANTS: 3

<sup>1</sup> As of 30 June 2007. Male/female ratio calculated based on total number of Linde Group employees in the region.

<sup>2</sup> H1 2007 (as of 30 June 2007), discounting revenue generated through joint ventures.

<sup>3</sup> Total plant capacity expressed in kilotonnes per year.

## Great growth potential in Asia

The South & East Asia region covers ten countries. It stretches from Pakistan in the west, moving eastwards towards India, Bangladesh and Thailand to then head south to Malaysia, Singapore and Indonesia, before curling back up the southeastern coast to Vietnam and the Philippines and then head up the east coast to South Korea. With literally hundreds of spoken languages and dialects, this is unboundedly one of the most culturally diverse regions in the world. The Asian gas market (excluding Japan) represents around 12 percent of the global market and promises growth of approximately 40 percent by the year 2020 according to experts.

Active on the Asian market since the 1930s, BOC traditionally enjoys a strong position in this region, and has progressively expanded its footprint over the years. As a result, The Linde Group, which includes BOC, is market leader in eight of the ten countries in the region. It ranks number two in India and is the third-largest provider in South Korea. This region accounts for around ten percent of the total Linde Group payroll. We are ideally positioned to capitalise on future growth opportunities with our strong local presence and in-depth understanding of the needs specific to emerging Asian economies.

In 2007, for example, we acquired Malaysian Oxygen Berhard (MOX), positioning us as the largest gas company in this fast-growing economy.

In addition, we have built several large-scale on-site plants since 2006, mainly for customers from the steel, chemical and petrochemical industries. Some prominent examples are listed in the following:

- Bellary, India: We built an air separation plant for JSW Steel Ltd. – the second-largest private steel manufacturer in India.
- Map Ta Phut industrial park, Thailand: Here we also built an air separation plant that will serve many large chemical companies in Thailand.
- Jurong Island, Singapore: We expanded our existing synthesis gas plant to supply our customer Lucite International Singapore Pte Ltd with carbon monoxide used to manufacture plastics input materials.
- Ho Chi Minh City, Vietnam: This project involved an air separation plant for the steel company Thép Viet Co. Ltd.

## Corporate Responsibility in South & East Asia

The extraordinary diversity of customers, countries and cultures in this part of the world ranges from India, which is the largest and most densely populated nation in the region with around 1.1 billion inhabitants, to the buzzing city-state of Singapore, the smallest country with 4.5 million inhabitants. In total, almost two billion people live in this booming corner of the globe, which is expected to sustain its current dynamic pace of growth over the coming years.

Fast-expanding economies present a number of Corporate Responsibility opportunities and challenges to a global technology corporation such as The Linde Group. This applies not only to economic growth, but also to the ecological and social changes that we are partly shaping through our local operations. Many Asian countries already have to contend with the consequences of unbridled economic growth, which are manifesting themselves above all in accelerated climate change, environmental damage, a growing shortage of natural resources and health problems for many members of society. In these and other key areas such as safety at the workplace, we feel a special sense of responsibility to behave in an exemplary manner and make a positive contribution to sustainable development in southern and eastern Asia.

### Social commitment

South & East Asia is often affected by natural disasters such as strong earthquakes and/or the accompanying tsunamis as well as widespread floods. In the event of such disasters, we contribute to both immediate relief operations as well as longer-term support projects. In 2005, for example, we assisted the tsunami victims in Asia with both monetary donations and supplies.

More recently, in May 2006 another earthquake struck Java Island in Indonesia with devastating results. Measuring 6.3 on the Richter scale, the quake's epicentre was located in the Indian Ocean about 25 kilometres from the southwest town of Yogyakarta. It claimed almost 6,000 lives and left more than 36,000 wounded and around 1.5 million homeless, most of them in the Bantul region and the district of Klaten. Just a few days after the earthquake, we sent three relief teams to the area around Yogyakarta to provide



↳ *Optimisation planning for our production facilities in India*

emergency aid to our employees and their families in the form of food and other supplies. Donations from regional management and employees meant that the employees affected were able subsequently to rebuild their homes. We also supported public rescue centres, public health authorities and three elementary schools with both financial aid and supplies. Our response to this earthquake also include a donation to the Indonesian Red Cross.

Looking beyond disaster relief, we are also engaged with various charitable causes and make regular donations to non-government associations such as Concern India Foundation, Cry and Helpage, and Utsav Children Cultural Group. These foundations are committed to improving quality of life for children, the disabled and the elderly.

In Malaysia, for example, we are helping a seven-year-old boy suffering from a chronic lung infection with regular deliveries of medical-grade oxygen free of charge.

In January 2007, we supported victims of flooding in southern Malaysia, concentrated mainly in the state of Johor, with around 15,000 school books, 300 uniforms and 30 school bags. And in the summer of 2007, we sponsored an event for underprivileged families in the Malaysian capital Kuala Lumpur. This involved aid in the form of clothing, furniture, toys, etc.

#### **Environmental protection and safety at the workplace**

Our Corporate Responsibility activities in South & East Asia reflect the particular importance we attach to health, safety and the environment (HSE) in this region. The National Occupational Safety & Health Excellence Award 2006 bears testimony to the success of our endeavours. It was recently presented to The Linde Group by the Prime Minister on behalf of the Malaysian government body responsible for safety at the workplace.

Similarly, we have increased our focus on occupational safety in India. In collaboration with three other gas companies, we expanded the Asian Industrial Gases Association (AIGA) by opening up a new branch office in Mumbai. The association was first registered in India in February 2007 and officially inaugurated on 18 May 2007 at the opening ceremony. Raj Narayanan from Linde's management board was elected president of the association at the event. The association endorses AIGA's values and has set itself the mission of improving and expanding safety and technical standards in the gas industry in India. AIGA was established in 2002 by the leading industrial gases producers operating in Asia, excluding Japan, Australia, New Zealand and the South Pacific nations. It aims to foster the exchange of technical information amongst its mem-

bers on the safe handling and use of industrial and medical gases, and to liaise closely with national authorities in order to work towards the highest level of safety and environmental care across Asian countries.

We are also active on the environmental front within company walls. Last year, and again this year, we took a number of measures aimed at preserving natural resources in southern and eastern Asia. These included various projects to optimise efficiency at our production plants and office facilities, in particular to reduce water and energy consumption, cut emissions of greenhouse gases, and increase plant capacity (see page 107).

These projects were flanked by various environmental initiatives such as our "plant-a-tree" projects at locations in India, Thailand and Malaysia.



↳ Left and right: Supporting a special festival for disadvantaged families in Kuala Lumpur, Malaysia (here: children's drawing competition)

### Efficiency projects for plants and facilities in South & East Asia

#### Singapore:

- By eliminating the combustion of surplus CO that creates CO<sub>2</sub> in our synthesis plant, we have saved 300 tonnes of natural gas each year and have helped to avoid 280 tonnes of CO<sub>2</sub> that would otherwise have been produced each year as a result of the natural gas burning.

#### Indonesia:

- Replacement of the CO<sub>2</sub> reliquefaction system in use at the Pulogadong storage tanks reduced evaporation losses by 3.6 tonnes.
- We dispose of catalyser waste, molecular sieves and lubricant oil through authorised specialist partners.

#### Malaysia:

- We installed a recovery plant for gaseous CO<sub>2</sub> in the dry ice plant in Nilai.
- We improved our offwater treatment facilities to ensure strict compliance with water quality regulations.

#### Philippines:

- We launched an environmental project in 2007 to reduce water consumption at our cooling towers in Apalit.

#### India:

- We tightened measures to protect against spills at our chemical and oil stores, prepared on-site emergency drills, ran "plant-a-tree" projects, planned rainwater collection facilities, and organised regular emissions checks for our fleet.



Greater China Regional Business Unit // Conserving resources and ensuring sustainable mobility are key Corporate Responsibility issues in this region. ↳ *Rice terraces in China*





Climate and environmental protection are therefore our core goals in Greater China. Our green hydrogen technology and corporate environmental activities allow us to make a significant contribution here.

# GREATER CHINA



China is the fourth largest and, with around 1.3 billion inhabitants, the most densely populated country in the world. With double-digit GDP (gross domestic product) growth, it is also one of the world's most dynamic regions. Economists are predicting that it could replace Germany as the world's third largest economy by the end of 2007. However, the current pace of growth cannot be sustained over time unless chronic environmental problems are addressed. One of the biggest challenges facing companies investing or operating in China entails getting a handle on the environmental issues affecting this economy. Consequently, our Corporate Responsibility agenda in the Greater China region focuses on concrete measures to actively control the greenhouse effect and protect the environment.

>> The Greater China Regional Business Unit includes the following markets: China/Taiwan/Japan.

>> EMPLOYEES<sup>1</sup>: TOTAL 2,297/FEMALE 26%/MALE 74%

>> BOARD MEMBER RESPONSIBLE FOR RBU: DR ALDO BELLONI

>> RBU MANAGER: STEVEN FANG

>> REVENUE (€ MILLION)<sup>2</sup>: 118

>> MARKET SHARE: 9%

>> TOP 3 COUNTRIES REVENUE (€ MILLION)<sup>2</sup>:

TAIWAN: 54

CHINA: 52

JAPAN: 6

>> MAIN PRODUCTION PLANTS:

AIR SEPARATION PLANTS: 36

CO<sub>2</sub> PLANTS (140 KTPY<sup>3</sup>): 14

HYCO PLANTS: 14

<sup>1</sup> As of 30 June 2007. Male/female ratio calculated based on total number of Linde Group employees in the region.

<sup>2</sup> H1 2007 (as of 30 June 2007), discounting revenue generated through joint ventures.

<sup>3</sup> Total plant capacity expressed in kilotonnes per year.

## A market with massive potential

The acquisition of BOC dramatically extended Linde's small footprint in China. From its home base in the UK, BOC was the first international gas company to actively extend its operations to the Chinese market. This gave BOC a valuable lead in the region and explains why The Linde Group is now market leader on the Chinese mainland with a share of just over nine percent. With our subsidiary in Shanghai and more than 40 regional companies, we currently handle sales to the value of around € 200 million a year in China. To date, Linde has invested around € 760 million in China. We are consistently working to strengthen our market position in the fast-growing Greater Chinese region, which includes Hong Kong and Taiwan. And we have every reason to believe that our expansion efforts will be successful. Over the next few years, we estimate that the gas business in China will grow at double-digit rates. This disproportionately high growth will be driven in particular by new applications in electronics and medical science. As a result, the Chinese market will develop faster than the rest of Asia. Our key accounts in China are mainly from the oil, chemical and steel industries. The public chemicals specialist Sinopec is one of our three biggest customers worldwide, for example. We have also captured around 33 percent of the pipeline market, serving customers with high gas demand.

## Environmental responsibility in a burgeoning economy

The booming Chinese economy is not without its downsides, however. Besides the possibility of a boom-bust cycle, the environmental impact of this growth threatens dire consequences. These are already materialising in many areas. Experts estimate, for example, that around 300 million people in China are already drinking water that does not meet the hygiene standards of the World Health Organisation (WHO). In addition, a recent World Bank report found that about 750,000 people die prematurely in China each year as a result of pollution.

These facts and trends simply raise the bar for Corporate Responsibility in China. We are called upon to demonstrate a special sense

of responsibility and proactively put measures in place to guard against climate change and to protect the environment.

## Eco-friendly solutions, thanks to hydrogen

Sustainable development and ongoing economic expansion in China hinge on the ability to resolve the energy dilemma. The divide in this country between the rapid rise in energy needs on the one hand and the lack of crude oil and natural gas reserves on the other is widening. So China must find a way of meeting its future energy needs in an environmentally friendly manner using the resources at its disposal. This means relying on the ample coal reserves for the time being and looking towards an alternative source of energy that does not rely on fossil fuels for the future. Thanks to our extensive experience in hydrogen technologies, we are ideally positioned to deliver solutions that help preserve resources, mitigate the greenhouse effect and minimise the environmental impact of growth in China. These solutions extend from the engineering side with on-site hydrogen manufacturing plants to the application end of things where hydrogen is used as a zero-emissions energy carrier of the future.

Coal is becoming an increasingly important raw material in the production of synthesis gases using the environmentally friendly coal gasification process. As part of a long-term supply agreement with Bayer Polyurethane Shanghai Ltd. Co., we are currently building a hydrogen plant on Bayer's premises in the Shanghai Chemical Industry Park in Caojing, near Shanghai, as part of a joint venture with Shanghai Coking & Chemical Corporation. From the middle of 2008, this facility will supply Bayer with hydrogen and carbon monoxide for the manufacture of plastics input materials. The synthesis gas produced by the Shanghai Coking & Chemical Corporation using environmentally friendly coal gasification is the feedstock for the manufacturing process involved. This concept helps to preserve the scarce natural gas and crude oil reserves in China, relying instead on the abundant supplies of coal.

We are currently building Shanghai's first hydrogen fuelling station. The move highlights our commitment to driving sustainable, environmentally friendly hydrogen-based mobility in China. The hydrogen station is being built in Shanghai Automotive City in



↳ Left and right: Optimising our Chinese production sites under our corporate environmental protection policy

collaboration with China's renowned Tongji University and Shell. It is part of a scientific development programme spearheaded by the Chinese Ministry for Science and Technology and is aimed at advancing the commercialisation of fuel cell vehicles in China. The fuelling station is scheduled to be fully operational in October 2007, and will supply three hydrogen-powered buses and up to twenty further hydrogen vehicles with compressed gaseous hydrogen. Linde is responsible for the entire hydrogen logistics chain, including compression, storage and fuelling technology as well as the delivery of the gas. The hydrogen station is the Shanghai government's first step towards creating a complete network of hydrogen stations that will fuel buses and other vehicles.

#### Corporate environmental protection in Greater China

Linde is committed to continuously improving the environmental performance of its business activities in Greater China. The key focus areas here include waste management and projects aimed at cutting energy and water consumption at our sites.

In Taiwan, for example, we have established a comprehensive waste management scheme whereby plastic, wood, scrap metal and general waste is collected, separated and recycled. In 2006 alone, almost four tonnes of waste material was recycled, thanks to this scheme. Our aim for 2007 is fifteen tonnes. Similar projects on the Chinese mainland have also been implemented. At various locations, waste metal, wood and paper is collected and recycled, in collaboration with contractors and service providers. At several of our mainland laboratories, we are also looking at how lubricants are stored and used and how waste chemicals are handled. We will use the results of this environmental impact study to introduce long-term improvements at these locations.

At several of our sites in China, including Hong Kong and Suzhou, we have launched a campaign to promote energy-conscious habits among our employees, such as switching off lights and air conditioning when offices are not in use. Furthermore, we have been able to cut energy and water consumption by optimising our production plants and increasing process efficiency. In 2006, Linde implemented a number of these projects at sites such as Nanjing, Shenzhen and Guangzhou.

Lowering fuel consumption and vehicle emissions is also a key objective in our road distribution strategy. During a roadshow held in the Greater China region, we introduced a route planning software that optimises and improves the coordination of delivery routes – which in turn drastically reduces the mileage covered by our trucks.



↳ Filling the BMW Hydrogen 7 with liquid hydrogen to great media interest in Shanghai, China

**Linde fuels BMW's Hydrogen 7 across China** // The CleanEnergy world tour is taking BMW's limited series hydrogen vehicle "Hydrogen 7" around the globe. In 2007, this cutting-edge motoring concept toured China. As BMW's exclusive partner, we were also on hand at this leg of the trip to provide the vehicle with liquid hydrogen from a mobile fuelling station. Between April and October 2007, Linde was responsible for filling the Hydrogen 7 in Shanghai, Beijing, Guangzhou and Hong Kong. Journalists, politicians and VIPs were able to test drive the car in each city. Discussion forums and press conferences were also held at the different events. BMW and Linde's broad presentation of this environmentally friendly hydrogen technology is a taste of things to come in China, where the 2008 Olympic Games will be held in Beijing under the motto of the "Green Olympic Games". The CleanEnergy events organised by BMW and Linde were a resounding success and reached a large number of Chinese stakeholders. Guests who visited the various stages of the tour included government officials from the Chinese environmental protection body as well as representatives from industry, infrastructure, technology and research.



South Pacific Regional Business Unit // We help our customers meet the climate and environmental challenges of today with our innovative product and service offerings.

↳ *Lake Amadeus, salt lake in Northern Territory, Australia*



In Western Australia, our technical solutions are helping, for example, to cut the carbon dioxide emissions released by a manufacturer of artificial fertiliser by around 70,000 tonnes per year, making a long-term contribution to climate control.

# SOUTH PACIFIC



The South Pacific region, and especially its predominant market, Australia, has become almost synonymous with climate change and the associated problems in public perception worldwide. The effects of the growing ozone hole above the Antarctic were first felt in Australia, where the permanent increase in UV radiation has resulted in a higher incidence of skin diseases, for instance. And this is why climate and environmental protection is right at the top of our Corporate Responsibility agenda for this region. Community involvement, particularly social projects, is another key focus of our activities here.

>> The South Pacific Regional Business Unit includes the following countries: Australia/New Zealand/Pacific Islands (Papua New Guinea, Fiji, New Caledonia, Samoa, Salomon Islands, Tonga).

>> EMPLOYEES<sup>1</sup>: TOTAL 2,643/FEMALE 25 %/MALE 75 %

>> BOARD MEMBER RESPONSIBLE FOR RBU: KENT MASTERS

>> RBU MANAGER: COLIN ISAAC

>> REVENUE (€ MILLION)<sup>2</sup>: 365

>> MARKET SHARE: 76 %

>> TOP 3 COUNTRIES REVENUE (€ MILLION)<sup>2</sup>:

AUSTRALIA: 303

NEW ZEALAND: 52

PAPUA NEW GUINEA: 7

>> MAIN PRODUCTION PLANTS:

AIR SEPARATION PLANTS: 14

CO<sub>2</sub> PLANTS (76 KTPY<sup>3</sup>): 8

HYDROGEN PLANTS: 8

<sup>1</sup> As of 30 June 2007. Male/female ratio calculated based on total number of Linde Group employees in the region.

<sup>2</sup> H1 2007 (as of 30 June 2007), discounting revenue generated through joint ventures.

<sup>3</sup> Total plant capacity expressed in kilotonnes per year.



## The Linde Group in the South Pacific

In terms of our operations, the South Pacific region covers Australia, New Zealand and the Pacific Islands (including Tonga, Fiji, New Caledonia, Papua New Guinea, Samoa and the Solomon Islands). We subdivide the Australian continent into the areas of New South Wales, Queensland, Western (West Australia, South Australia and Northern Territory), and Southern (Victoria and Tasmania).

As the leading gas provider in the South Pacific for over 75 years, BOC has laid the foundations of our current strong presence in this region. The company already has an excellent production infrastructure and dense sales network in place. This allows us to offer customers of all sizes our entire product portfolio in any constellation they desire. Our operations here focus on Australia and New Zealand, which alone account for 65 percent of our overall air-separation capacity in the South Pacific region.

## Commitment to our surroundings

Climate and environmental protection play a key role in our Corporate Responsibility strategy in the South Pacific. Our multipronged approach involves making ongoing improvements to our own environmental measures, supporting national initiatives through our Community Investment Programme and enabling customers to better meet their responsibilities with our comprehensive product and service offerings. And our stakeholders clearly recognise our commitment, ranking us fifth on the Australian Corporate Responsibility Index in 2005 (CRI, see page 029, Capital markets) alongside other major companies such as Westpac and Toyota. We are participating in the 2007 index. We are also one of the first companies in Australia to take part in an emissions trading programme for greenhouse gases.

### Water and energy conservation projects in Australia

BOC has developed internal standards and guidelines to cut water and energy consumption, which in turn support the individual conservation programmes at each of our sites. Under our corporate environmental protection scheme, numerous projects to conserve energy and water have been implemented during this and last year at various locations in the South Pacific – most notably Australia. In 2006, we saved just under 16,000 cubic metres of water in Australia alone and have successfully put measures in place to cut our energy consumption in every country throughout the region.

### “Where there’s water ...”

“Where there’s water ...” is our programme for supporting national projects in New Zealand that promote long-term protection of the environment, especially water. This programme is spearheaded by our New Zealand employees and implemented in collaboration with the New Zealand Water Environment Research Foundation (NZWERF). The main aims of the initiative are:

- increasing public awareness of the importance of our water environment
- supporting environmental education programmes for children
- promoting and supporting local water protection projects

### Oxygen for Swan River

At the end of 2006, BOC was able to contribute valuable expertise in water oxygenation systems to a water protection project in Perth, Western Australia. The city’s most important waterway, Swan River, intermittently suffers from a particular lack of oxygen. This impairs the water quality, and therefore has an enormous impact on organisms within the river. Initiated by the Western Australian Minister for the Environment, the oxygenation project set out to remedy this, with BOC taking on its technical implementation. Thanks to our innovative VITOX oxygenation system, the river’s oxygen level increased significantly, making a lasting improvement to the quality of life within it.

### Cutting down on CO<sub>2</sub>

Elevated levels of certain gases (e.g. carbon dioxide (CO<sub>2</sub>), methane and others) in the atmosphere is the main cause of the greenhouse effect, a process that raises the Earth’s temperature and subsequently leads to changes in our climate. This makes the reduction of greenhouse gas emissions one of the most urgent environmental protection goals worldwide. In Western Australia, we are involved in a pioneering project that aims to solve one environmental problem by tackling another. In collaboration with the aluminium manufacturer Alcoa and the chemicals company CSBP, Australia’s largest supplier of artificial fertilisers, BOC is investing in the infrastructure required for safe carbon dioxide storage. The greenhouse gas, generated during ammonia production at the CSBP plant in Kwinana, south of Perth, is initially piped to the nearby BOC location. Here it is pretreated and purified. The processed CO<sub>2</sub> is then pumped to Alcoa’s waste processing plant, also via pipeline, and injected into bauxite residue, a by-product of aluminium production. This process decreases the material’s alkalinity (pH) levels and perma-

**Recovering SF6** // Sulphur hexafluoride (SF6) is a non-toxic, incombustible and almost inert specialty gas, mainly used as a filler gas for insulated window glazing and in the electronics and semiconductor industries. SF6 is one of the greenhouse gases that have a particularly negative impact on the climate. Its greenhouse potential is around 24,000 times that of carbon dioxide.

SF6 gas cylinders returned by customers are usually not entirely empty and could not previously be processed in Australia due to a lack of appropriate facilities. But that has all changed now. In September 2006, BOC imported a complete SF6 recovery plant from the USA and has since been able to process all returned SF6 cylinders on-site in Australia, recovering the gas at 99.9 percent purity and redistributing it. This not only recycles a residual product in high demand, but also helps prevent this particularly harmful gas from entering the atmosphere.

nently binds the CO<sub>2</sub>. On the one hand, this significantly reduces waste storage risks by lowering the pH value of the residue to a level naturally occurring in soil. The waste can therefore be reused, for example in road construction or soil enrichment. On the other hand, the process also prevents the CO<sub>2</sub> that would otherwise be emitted by CSBP from entering the atmosphere and contributing to the greenhouse effect. This project sustainably reduces carbon dioxide in the atmosphere by 180 tonnes per day, or 70,000 tonnes per year. This figure is equivalent to the average CO<sub>2</sub> emissions of 17,500 cars and represents a significant contribution to climate protection.

### Fostering social responsibility: the Community Investment Programme

Guided by our principles of sustainable conduct, we pursue a holistic approach in the South Pacific region to achieve the best possible results for our business, our employees and the wider community in which we work.

Our Community Investment Programme provides the overarching structure for our social commitment, particularly in Australia and New Zealand. Children and young people, health and the environment form the core focal points of our social CR activities in the region, and all of these are bundled within the framework of our Community Investment Programme. The programme primarily comprises three national sponsoring projects:

- The Redkite programme, supporting children and young people with cancer
- The RYDA programme, offering road safety education to fifth-formers
- The "Where there's water..." programme, promoting water-related environmental projects in New Zealand

It is a top priority for us that our employees are closely involved in all our social activities in this region, allowing them to demonstrate their high level of personal commitment.

#### Redkite against cancer

From a corporate perspective, the Australian BOC organisation is the biggest sponsor of the Redkite initiative, previously known as the Malcolm Sargent Cancer Fund for Children. Redkite is a national charity that provides children with cancer, and their families, with practical, financial and educational support – from initial diagnosis through the duration of treatment to aftercare. We are the main national sponsor of the Redkite Corporate Quiz – the largest annual Redkite fund-raising event. Our employees also provide voluntary support, make donations and participate in collection drives.

#### Strengthening driver safety awareness

As a gases and engineering company, occupational safety is the top priority in our SHEQ policy. We comply with the strictest safety standards throughout every step of our gas handling processes, from production through storage to transport and application at customer sites. Our driver training programmes are an important means of ensuring safe transport, for instance, and we lead by example with a wide range of safety-related activities in this area. This includes supporting the Rotary Youth Driver Awareness (RYDA) programme, which promotes road safety education for fifth-formers. RYDA fosters a heightened awareness of traffic safety before learning to drive. Studies have shown that driver behaviour as well as the accurate assessment of traffic situations and personal capabilities can be shaped most effectively in the run-up to driving lessons. Our support has enabled RYDA to expand its driver training programme in Australia and New Zealand, thus helping to increase road safety.



↳ CO<sub>2</sub> treatment unit for an environmental project at the Kwinana site, Western Australia

#### Examples of conservation projects at Australian sites

##### **Nowra, New South Wales:**

- Reduction of process water consumption by a third

##### **Kooragang Island, New South Wales:**

- Installation of a rainwater tank with pipeline system to supply internal water requirements on site (e.g. washrooms)
- Watering surrounding garden areas with accumulated wastewater
- Truck wash bay using recycled water

##### **North Ryde, New South Wales:**

- Twenty percent reduction in water consumption through plumbing modifications and improvement of irrigation system
- Lower energy consumption by optimising night-time site lighting

##### **Bulwer Island, Queensland:**

- Forty percent reduction in water consumption through use of recycled water in truck wash bay, replacing water from municipal reserves

#### Donations and aid projects in the South Pacific region 2006/2007

##### **Donations:**

- Cash donations: EUR 12,400
- Donations in kind: EUR 6,200

##### **Projects:**

- RYDA (Rotary Youth Driver Awareness): EUR 158,000
- Redkite (children's cancer support): EUR 77,500
- "Where there's water..." (water protection): EUR 31,000

# GIST DIVISION

*Our Gist Division is a leading provider of logistics and supply chain solutions. From warehouse management, to transport and delivery, to direct collaboration with our consumers, Gist offers a wide range of services that resonates strongly among our customers. So it is not only quality of service that counts at Gist – stakeholder relations is equally important. This involves intensive dialogue between employees and customers and a strong focus on safety, environmental protection and social commitment.*

>> The Gist Division includes the following countries: Great Britain/the Netherlands/Spain/Germany/France/Portugal/Poland/Czech Republic/Australia/Philippines.

>> EMPLOYEES<sup>1</sup>: TOTAL: 4,656

>> BOARD MEMBER RESPONSIBLE FOR DIVISION: PROFESSOR DR WOLFGANG REITZLE

>> DIVISION MANAGER: MARTIN GWYNN

>> REVENUE (€ MILLION)<sup>2</sup>: 288

>> TOP 3 COUNTRIES REVENUE (€ MILLION)<sup>2</sup>:

GREAT BRITAIN: 253

THE NETHERLANDS: 33

CZECH REPUBLIC: 2

>> MAIN PRODUCTS:

LOGISTICS SERVICES FOR RETAIL CHAINS,

BREWERIES,

AIRLINES

<sup>1</sup> As of 30 June 2007

<sup>2</sup> H1 2007 (as of 30 June 2007)

### Logistics services for Europe

Part of the former BOC Group operations, Gist was first founded in 1970 as The BOC Distribution Services Business. Leveraging its cryogenic gas (liquid nitrogen) know-how, its main focus was on transport solutions for refrigerated goods. In 2001, the name was changed to Gist, emphasising the independent nature of this business area.

The Gist Division is now a leading supplier of logistics services and supply chain solutions, with the hub of its operations in Great Britain. Through the acquisition of the Dutch temperature-controlled transport operator G Van Dongen Holdings BV, with its European footprint, Gist expanded its services to the Netherlands, Spain, Germany, France and Portugal, and widened its offering in Poland, the Czech Republic, Australia and the Philippines.

With a staff of around 5,000, Gist generated revenues of approximately € 550 million in 2006, around 80 percent of which stemmed from Great Britain. Our customers here are drawn from numerous areas of industry and retail. With 450 stores, Marks & Spencer is one of Britain's retail giants and has been Gist's largest customer for over 30 years. Other notable customers include Woolworths, Ocado, British Airways, Carlsberg UK, Budgens and Intergreen.

### Corporate Responsibility at Gist

Gist is firmly committed to responsible conduct in all areas of its relationships with its stakeholders and fully endorses the Linde Corporate Responsibility Policy. The division maintains a close, trust-based partnership with its customers and service providers, collaborating on environmental protection and safety issues as well as social initiatives. And Gist actively encourages its managers to behave as good corporate citizens in their dealings with employees and the public.

Within the five dimensions of Corporate Responsibility at Linde, the Gist Division has identified the focus areas highlighted on the chart on page 123.

### Collaborating with customers and service providers

Gist follows the aims of The Linde Group's Corporate Responsibility strategy in collaborating with its customers and service providers. Protecting our environment and ensuring safety at work are crucial parts of our philosophy here, in accordance with the key SHEQ principle: "We, The Linde Group, are determined to avoid causing harm to people or the environment."

In line with this, we are collaborating with our largest customer, Marks & Spencer, on an ambitious project to double its offering of locally produced groceries within a year. The project also involves reducing CO<sub>2</sub> emissions and waste. Marks & Spencer has defined clear goals, which we fully support to the best of our ability.

Our measures, designed to harmonise economic and environmental goals, include:

- Improving vehicle loading to reduce total kilometres driven for deliveries
- Avoiding empty loads wherever possible
- Economical use of fuel
- Waste recycling
- Reducing plant energy consumption and increasing self-supply
- Environmentally friendly cooling systems, conveyors and vehicles
- Employee training to promote eco-aware conduct

Through these activities we have already increased our transport efficiency by 11 percent at Marks & Spencer, for example, and reduced our delivery distances by around 4.5 million kilometres with improved route planning. Limiting speed to 85 km/h on main roads and motorways and using more heavy goods vehicles with automatic transmission has cut fuel consumption significantly.

These steps therefore represent sustainable improvements to our environmental performance and also allow us to transfer the knowledge we have gained from this project to our partnerships with other customers.

We also harness our extensive experience in transport safety for our customers' benefit, enabling measurable reductions in accident costs, product losses and downtime. We have successfully cut costs and boosted productivity at Carlsberg, for instance.

Particularly for a logistics company such as Gist, occupational safety – and especially transport safety – is a top priority. We therefore place great value on driver training, for example.

We have also launched a campaign to increase road transport safety, installed three-point safety belts in all our vehicles as a mandatory requirement, and strictly forbid the use of mobile telephones while driving.

Gist has also installed safety bars on its trucks to protect drivers when connecting trailers to tractor units. Tall trucks, in particular, have been equipped with stability systems to further reduce the risk of overturning.

Our Gist Division works closely with its customers to deliver on its sense of social responsibility. Again with Marks & Spencer, we have established a joint charity project to support people facing hardship, for example. Within the Fairshare project, we distribute groceries with short expiry dates to organisations for the homeless and associated kitchen facilities. This is part of a national relief campaign, in which around 1.2 million meals are distributed to those in need each year. The Marks & Spencer and Gist partnership contributes a large portion of these.

#### Supporting local communities

Another facet of our social responsibility involves collaborating with and supporting local communities. This is particularly important because many of our sites are located near residential areas and inhabitants may perceive our logistics operations as disruptive. We observe the following guidelines in our local community activities:

- We attempt to minimise noise and emissions from our sites and vehicles and train our employees appropriately

- We sponsor several local charitable organisations, and provide financial support for sports clubs and to relieve social problems
- We maintain close contact with schools, collaborating on road safety education, internships and careers advice
- We offer employment opportunities for homeless people, ex-prisoners and former members of the armed forces

#### Working with our employees

The success of the Gist Division is built on its employees. They might spend hours working in refrigerated food warehouses at two degrees Celsius, cover 10 to 15 kilometres per shift, or put in over 65,000 kilometres each year behind the wheel, for example. So we offer comprehensive programmes to our staff and their families, fostering health, flexibility and motivation. Our activities in this area include:

- Adult education programme for reading, writing, mathematics and languages
- Open days at our sites for family members, to increase their understanding of our operations
- Company participation in all donation campaigns initiated by employees
- Material and logistical support for special charitable campaigns (e.g. for orphaned children in the Chernobyl region, Ukraine)
- Campaigns to increase safety awareness in the home
- Non-smoking and other health programmes
- Bereavement support

These varied activities are all part of our wide-ranging Corporate Responsibility efforts, which extend both to our employees and to all other people and organisations that come into contact with Gist.

**Gist stakeholder dialogue**

- Active membership of local chambers of commerce
- Regular contact with local authorities
- Close collaboration with the British Home Office regarding illegal workers
- Cooperation with the transport authorities regarding safety issues
- Membership of the Freight Transport Association and involvement in shaping legislation

**Corporate Responsibility focus at the Gist Division**



# Facts and Figures

Our key CR data relates to three areas – HSE (health, safety, environment), human resources<sup>1</sup> and economics. We are constantly expanding and enhancing the quantity and quality of our key indicators to meet ever evolving internal and external requirements.

Key indicators play a pivotal role in guiding the success of our CR strategies. They enable us to measure developments in our five CR key dimensions and benchmark progress over a period of several years. This allows us to quickly recognise areas offering room for improvement and define concrete improvement targets. At the same time, our key indicators are also an important information tool for stakeholders. In selecting and measuring areas to be benchmarked, we are guided by international recommendations and guidelines such as the Global Reporting Initiative (GRI), World Business Council for Sustainable Development (WBCSD) and Responsible Care (RC) initiative, and look in particular at the main environmental impact of our business activities.

The merger between Linde and BOC posed major challenges in acquiring and consolidating this data. Differences in scope, fundamental definitions and measurement methods first called for comprehensive standardisation. Against this background, we are now focusing our reporting activities on core key indicators that are particularly relevant to our business and about which we are able to make full and complete statements.

## Presentation of key indicators

Wherever possible, we are now publishing our key data in comparative format for the years 2004, 2005 and 2006.

In the course of restructuring The Linde Group around the gases and engineering businesses, we also adapted the presentation of our data accordingly, and will now be publishing it in retrospect for 2004 and 2005 as well as for the 2006 financial year. The data for the BOC gases business in financial year 2006<sup>1</sup> is stated separately. We have deducted figures relating to the KION Group, Linde's former forklift

segment, from the year-based comparison and excluded spin-offs in 2006. The data in the CR Report 2007 therefore deviates from corresponding figures in the CR Report 2005.

When viewing our key indicators by year, it is important to note that The Linde Group has grown significantly as a result of the BOC merger. Since emissions and resource consumption are directly related to production, financial year 2006 saw an increase in our absolute environmental figures. To demonstrate this clearly, we display the BOC and Linde figures separately in certain instances.

## Data collection

In 2006, both Linde and BOC gathered company-wide performance figures in the HSE and human resources areas using their own reporting tools<sup>2</sup>. For a more comprehensive, standardised and consolidated presentation, we have also collected additional data for the same year. This was compiled by representatives in the SHEQ, HR and finance departments within each division.

We acquired Linde key data for 2005 and 2004 using the web-based data collection and information system "Reportal".

## Outlook

We are still working on the task of standardising the key indicators and definitions of the former Linde and BOC organisations (see also page 010). We intend to establish a new, web-based data collection system for this purpose, standardised across the entire Group.

We will also be aiming to meet the following additional objectives in our future reporting:

- Definition and implementation of more detailed and standardised Group-wide criteria for HSE and HR key data acquisition within the framework of ongoing qualitative data optimisation

<sup>1</sup> The period under review for the former Linde organisation is the financial year year from 1 January to 31 December 2006. The BOC data spans the business period from 1 October 2005 to 30 September 2006.

<sup>2</sup> Data acquisition was performed at company level by the former Linde organisation and at location level by BOC.



- Expanded scope for key indicators in line with internationally recognised standards and stakeholder requirements, covering all core sustainability issues
- Extension of data acquisition to all consolidated organisations and locations, with a target consolidation level of 100 percent
- Further development of central key performance indicators (KPIs), enabling the formulation of concrete goals and definition of necessary measures for the most important sustainability issues. The prerequisite for this is a consistent repository of comparable data, which we will focus on establishing in 2008

**In achieving these objectives, we will be guided by the following criteria:**

RELEVANCE	Our key indicators will meet all the core environmental, social and economic sustainability issues we have identified, and provide effective guidance for our stakeholders in assessing The Linde Group performance.
COMPARABILITY	We will base our key indicators on standardised definitions and criteria. We will select and present our figures in such a way that they enable identification of changes over time and support comparison with other organisations.
TIMELINESS	We will gather and update our key indicators regularly. We will be collating safety data on a quarterly basis, for example.
CLARITY	We will publish our key indicators in a clear and comprehensible format.

**Health, safety, environment**

Our key HSE figures reported for 2006 cover 918 national and international production, sales and administration locations<sup>3</sup>. In collecting data for the Gases Division, we focused on the production facilities with the highest resource consumption, such as HyCO plants (steam reformers and partial oxidation facilities, see glossary) and air separation plants.

To allow for our divisions’ different areas of activity, we state our key figures for the Gases and Engineering divisions separately where relevant.

**Management systems**

For certain locations with high environmental impact, The Linde Group aims for certification to the international environmental management standard ISO 14001. 184 of the affected locations (over 20 percent) are certified to this standard, which provides us with a basis for a comprehensive environmental management system. Our internal environmental managers receive support from external experts where required, and our sites are regularly inspected by independent auditors.

The ISO 9001 set of standards is of particular significance in terms of ongoing improvement to the quality of our products and services, especially for our gases business. 595 of the relevant locations (around 65 percent) are certified to this standard. And, as far as health and safety management is concerned, eight percent of locations report certification to the OHSAS 18001 standard or to SCC (Safety Certification Contractors).

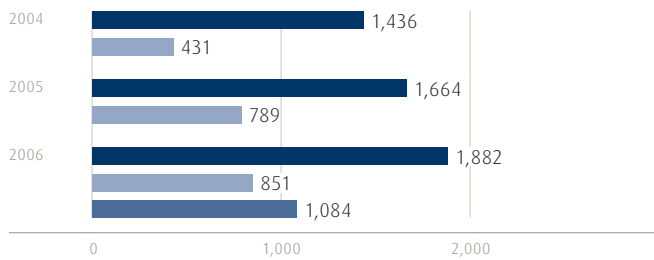
**Audits and training**

Regular audits verify and document our HSE performance. The results of these audits allow us to improve further. Both processes and systems are subject to systematic inspection to ensure compliance with management system requirements, industry and company standards, and the applicable national and international legislation.

<sup>3</sup> Data was gathered from a total of 1,094 locations. Our reporting includes data from 877 locations in the Gases Division, of 1,051 surveyed. The Engineering Division data relates to 13 of 15 locations surveyed. We have also incorporated data from a total of 28 (of 28 surveyed) Gist, Environmental Management Corporation and Fred Butler locations.

The graphic below shows the number of internal and external audits performed at Linde operating locations. Combined audits such as occupational safety and environmental audits are shown separately for Linde, while occupational safety and health protection audits are grouped together. The figures for BOC refer to the total numbers of integrated audits.

**Number of audits performed**



- Occupational safety and health protection audits at Linde.
- Environmental protection audits at Linde.
- Occupational safety, health and environment protection audits at BOC.

In the former Linde organisation, 43.7 percent of employees participated in environmental protection and safety training in 2006. At BOC, employee training and courses were performed using "Tracess", a web-based database of relevant programmes and material. Specific figures were not determined.

**Accidents at work**

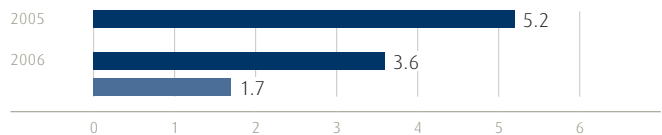
Safe working conditions worldwide are a basic prerequisite for our daily activities (see page 048). The lost time injury rate (LTIR), capturing the number of accidents at work entailing at least one day of absence per 1 million hours worked, has reduced following our acquisition of BOC, although the absolute number of incidents has increased. Looking at the detailed results, we managed to improve the lost time incident rate in almost all areas of the former Linde and BOC organisations.

In 2006, a workplace accident resulting in fatality occurred at BOC, with an employee from South Africa dying in a traffic accident.<sup>4</sup>

There were no fatal accidents within the Linde organisation in 2006 (2005: 3).

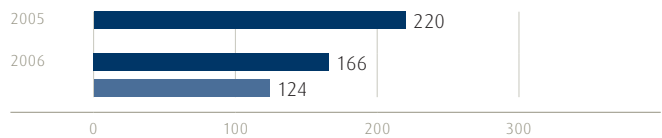
To prevent accidents and reach our zero-accident objective, we will continue to adhere to our comprehensive safety strategy and implement preventative measures across all business areas (see page 048).

**Number of incidents per million hours worked (lost time injury rate; LTIR)**



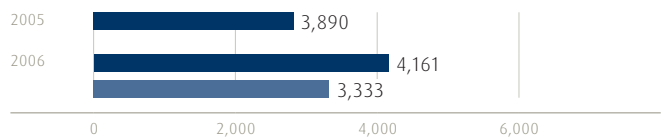
- Number of incidents per million hours worked at Linde.
- Number of incidents per million hours worked at BOC.

**Number of workplace accidents entailing at least one day of absence**



- Number of workplace accidents entailing at least one day of absence at Linde.
- Number of workplace accidents entailing at least one day of absence at BOC.

**Total number of working days lost due to accidents**



- Total number of working days lost due to accidents at Linde.
- Total number of working days lost due to accidents at BOC.

Our occupational safety standards also apply to contractors working on our sites to construct complex industrial facilities. Although employees of third-party companies are themselves responsible

<sup>4</sup> This statement of fatal workplace accidents differs to that in our Financial Report 2006. The second fatal workplace accident mentioned in that report concerned a BOC Edwards employee. As BOC Edwards has since been sold, we report only one fatal accident here.

for complying with safety requirements on construction sites, we step up to our responsibilities within the production chain and also make our expertise widely available. We aim to ensure high safety throughout the entire duration of our projects by means of strict guidelines governing safety, occupational and environmental protection measures for all employees involved in construction, and continuous monitoring of every construction phase by our experts.

As a result, the number of accidents per million hours worked (lost time injury rate; LTIR) in our Engineering Division and among our contracted employees on construction sites has dropped sharply. At 4.5 in 2004, LTIR dropped to 1.1 in 2005, and again to 0.5 in 2006. The number of working days lost due to accidents remained at the previous year's level of four in 2006 (2004: 15). There were no accidents leading to fatalities involving Engineering Division employees or contractors in 2006 (2005: 1; 2004: 0).

## Energy consumption

In 2006, The Linde Group's total electricity and natural gas consumption was over 46 TWh. The majority of this was needed to power our air separation and HyCO plants (see plant-specific environmental figures, page 130).

The significant increase in energy consumption against previous years correlates with the rise in production facilities following our merger with BOC, with the number of electricity-intensive air separation plants more than doubling.<sup>5</sup>

Natural gas is primarily used for production purposes in our HyCO plants, the number of which has risen by 26 percent. The increase in natural gas consumption is also attributable to the higher capacity of the BOC plants.

Our consumption of fuel oil, district heating, butane and propane totalled 1,125 GWh in 2006.

### Linde Group energy consumption

Energy	Linde Group 2006	Linde 2005	Linde 2004
Total electricity (GWh)	22,236	9,828	9,539
Gases Division	22,167	9,777	9,491
Engineering Division	45	49	42
Natural gas (GWh)	24,792	10,887	10,808
Gases Division	24,405	10,827	10,734
Engineering Division	42	60	63

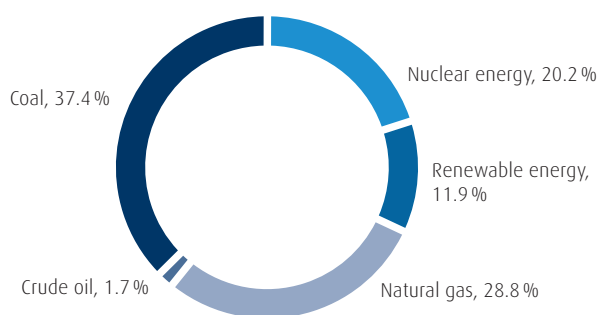
Due to the high greenhouse gas emissions and costs involved in powering our plants, energy efficiency continues to be a top priority for our environmental management policy. We intend to improve our energy ratings by implementing projects to reduce energy consumption (see page 053) and employing the latest energy-saving technologies.

## Sourcing our electricity

The breakdown of energy sources used to generate electricity varies substantially from one region to another. The graphic on the next page shows the proportions generated by the various energy sources worldwide. This data accounts for around 70 percent of our total global consumption and includes those countries where our energy consumption is particularly high. We do not anticipate any major percentage fluctuations, and assume that the proportional distribution of energy sources will remain approximately the same when the data from other countries where we are also active is added to this breakdown.

<sup>5</sup> Linde currently operates around 265 air separation and over 63 HyCO plants, compared with 117 air separation and around 50 HyCO plants in 2005.

### Breakdown of electricity generated for Linde by energy source



The high coal ratio is primarily due to its heavy usage in China, the USA and Germany. The portion of renewable energy relates to renewable electricity in Germany and electricity from hydropower in Sweden, Norway, China and the USA.

### Direct and indirect CO<sub>2</sub> emissions

In 2006, The Linde Group directly emitted 4.2 million tonnes of CO<sub>2</sub> (2005: 2.3, 2004: 1.9). This substantial increase is primarily due to the growing number of HyCO plants, which are responsible for around 75 percent of our direct CO<sub>2</sub> emissions (see Plant-specific environment data, page 130). The remaining CO<sub>2</sub> emissions are mainly generated by other combustion processes.

Indirect CO<sub>2</sub> emissions are attributable to the carbon dioxide produced to generate energy procured from third parties (electricity, district heating, steam). It is not released directly at Linde locations. In the 2006 financial year, Linde indirectly emitted 11.3 million tonnes of CO<sub>2</sub>.<sup>6</sup> This considerable increase from 2005, when our indirect emissions were 4.3 million tonnes<sup>7</sup>, is largely attributable to the energy required by the higher number of air separation plants that accompanied our BOC merger (see Plant-specific environment data, page 130).

The Linde Group is implementing a comprehensive CO<sub>2</sub> avoidance strategy to reduce direct and indirect CO<sub>2</sub> emissions. In plant operation, this strategy is geared towards ongoing efficiency improvements and internal energy conservation projects. We are also working on renewable hydrogen production and CO<sub>2</sub> recycling concepts. The Engineering Division is advancing technical solutions for climate protection by developing CO<sub>2</sub> separation technologies, for example (see page 058).

As well as presenting our absolute CO<sub>2</sub> emissions, our future aim is to report on our relative CO<sub>2</sub> emissions – that is, the volume of CO<sub>2</sub> emitted in relation to production volume. This indicator will allow us to measure our efficiency increases and the effects of technical innovations in the future.

### Other air emissions

For the first time, we are expanding our reporting to include emissions of air pollutants. These include inorganic gases such as carbon monoxide (CO), sulphur oxides (SO<sub>x</sub>), nitrogen oxides (NO<sub>x</sub>), ammonia (NH<sub>3</sub>) and volatile organic compounds (VOC, see glossary). These air emissions are by-products of our production processes, and totalled 1,494 tonnes in 2006 at the locations surveyed.<sup>8</sup>

VOC emissions at Linde are primarily generated in connection with the painting processes required for gas cylinders and storage tanks. Emissions of CO, NO<sub>x</sub> and SO<sub>x</sub> arise from combustion processes. The majority of SO<sub>x</sub> emissions in 2006 resulted from CO production in Asia due to the high sulphur content of the fuels used. The major share of CO emissions in 2006 is attributable to two HyCO plants, which released CO into the atmosphere following production failures. In rare cases, NH<sub>3</sub> may be emitted during nitrous oxide or acetylene production.

Air emissions, 2006	in tonnes
VOC	86
NH <sub>3</sub>	50
CO	313
NO <sub>x</sub>	522
SO <sub>x</sub>	523

<sup>6</sup> A description of the calculation methods we use for direct and indirect CO<sub>2</sub> emissions is available on the Internet at [www.linde.com](http://www.linde.com).

<sup>7</sup> Our indirect CO<sub>2</sub> emissions in 2004 amounted to 4.2 million tonnes.

<sup>8</sup> No data is available for individual regions. The data shown corresponds to the following percentages for the locations surveyed: VOC: approx. 40 percent, NH<sub>3</sub>: approx. 56 percent, CO: approx. 55 percent, NO<sub>x</sub>: approx. 55 percent, SO<sub>x</sub>: approx. 49 percent.

## Waste management

In 2006, Linde generated approximately 71,000 tonnes of waste worldwide. Around 57 percent of this was non-hazardous and 43 percent hazardous waste. This distinction is drawn in accordance with national categorisations in each individual country. Hazardous waste from the Gases Division particularly includes oil and oil-containing materials from compressors in our air separation, acetylene and hydrogen plants, as well as oily sludge produced in cleaning the oil-water separators. Scrap metal forms a significant part of the Engineering Division's waste, totalling 1,138 tonnes in 2006 (2005: 1,095 tonnes; 2004: 1,823 tonnes). The high volume of waste from the Engineering Division in comparison with previous years (2005: 3,754; 2004: 2,832) is primarily due to two major construction sites in Germany. However, the recycling rate was very high here.

Waste 2006	in tonnes
Total waste	70,947
Gases Division	57,433
Engineering Division	5,651
Total hazardous waste	30,306
Gases Division	28,966
Engineering Division	1,217
Total non-hazardous waste	40,641
Gases Division	28,467
Engineering Division	4,434
Total recyclable materials	20,626
Gases Division	9,363
Engineering Division	5,249
Total landfill waste	37,016
Gases Division	34,821
Engineering Division	385
Total incineration waste	13,306
Gases Division	13,249
Engineering Division	17

## Environmental incidents that must be reported to the authorities

At the locations surveyed, there were eleven environmental incidents that had to be reported in 2006. These resulted in a series of small fines and warning fees.

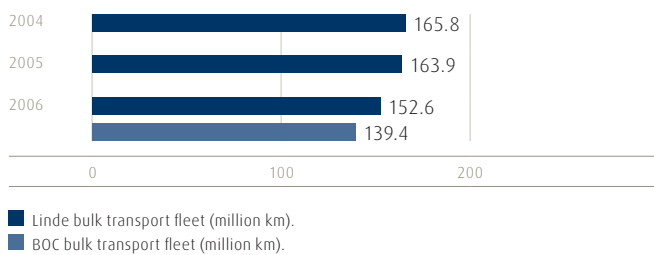
## Key figures for transport logistics

We have developed a global transport network to deliver our customers with gas products in tanks and cylinders. The number of kilometres driven has increased sharply following the BOC merger, resulting in higher transport-related emissions.<sup>9</sup>

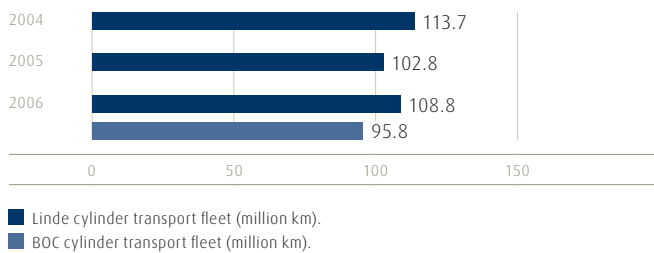
Our aim is to increase the efficiency of our transport logistics, not only for financial reasons, but also because such a move aligns with our environmental goals. Measures such as optimising route planning, improved use of resources and driver training all have a positive impact on our environmental performance here.

<sup>9</sup> It is not currently possible to provide concrete data for our transport-related emissions, although we aim to include this in our reporting in future.

**Number of kilometres driven by tank transport fleet in million km**



**Number of kilometres driven by cylinder transport fleet in million km**



**Plant-specific environment data**

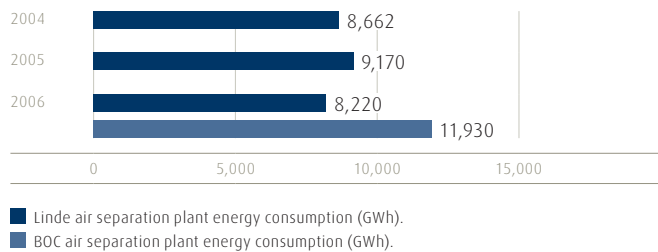
Our plant-specific environment data provides us with key performance indicators. We target the plants with the proportionately highest use of resources – our air separation and HyCO plants.<sup>10</sup> The significantly higher BOC figures are due to that company’s greater number of production facilities compared with Linde (see page 127).

Air separation plants split air into its main components – nitrogen (approx. 78 percent) and oxygen (approx. 21 percent). The remaining one percent comprises argon, carbon dioxide and noble gases. Production of air gases requires high electricity and water consumption.

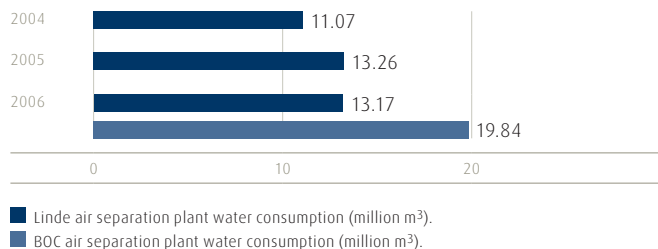
The majority of all water<sup>11</sup> consumed by the gases business is used for cooling processes in the air separation plants. Air separation also accounts for approximately 90 percent of the electricity used by Linde, causing our high indirect CO<sub>2</sub> emissions. Since the

production chain does not involve combustion, there are no direct emissions of carbon dioxide, sulphur oxide, nitrogen oxide or other pollutants.

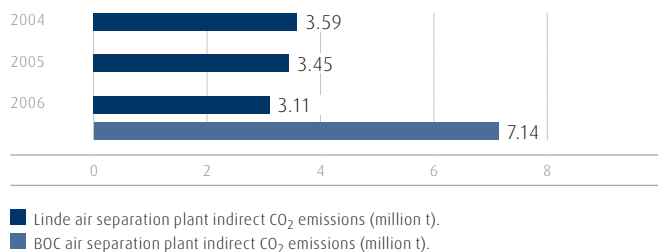
**Air separation plant energy consumption in GWh**



**Air separation plant water consumption in million m<sup>3</sup>**



**Air separation plant indirect CO<sub>2</sub> emissions in million tonnes**

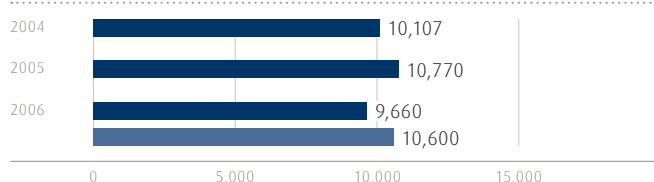


<sup>10</sup> This data is also available from our 2006 Financial Report, audited by KMPG.

<sup>11</sup> Since there are uncertainties about data validity relating to total water consumption, we have not published these figures here. We continue our efforts to establish clear criteria for our water consumption to enable publication of this data in the future.

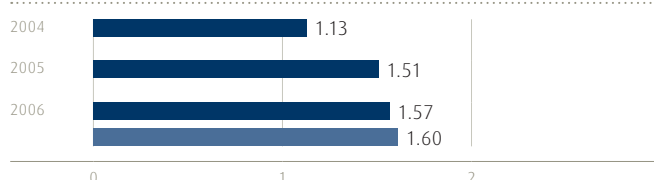
Our HyCO plants (steam reformers and partial oxidation plants) primarily generate direct CO<sub>2</sub> emissions through hydrogen synthesis and the use of fuel to reach the reaction temperature required. These plants also account for the majority of our overall natural gas consumption.

#### HyCO plant natural gas consumption in GWh<sup>12</sup>



■ Linde HyCO plant natural gas consumption (GWh).  
 ■ BOC HyCO plant natural gas consumption (GWh).

#### HyCO plant direct CO<sub>2</sub> emissions in million tonnes



■ Linde HyCO plant direct CO<sub>2</sub> emissions (million t).  
 ■ BOC HyCO plant direct CO<sub>2</sub> emissions (million t).

## Human Resources

Our human resources (HR) overview supplements the figures for 2006<sup>13</sup> and 2005<sup>14</sup> with more recent information from The Linde Group for the first quarter of 2007. Since the data for this year has been prepared using a different calculation method<sup>15</sup> to that used in previous years, we have not included 2007 in our year-on-year comparisons.

### Employment structure

At 31 December 2006, 51,038 people were employed by The Linde Group worldwide. This included 39,142 employees in the Gases Division (2005: 17,783; 2004: 17,570) and 5,166 in the Engineering Division (2005: 4,408; 2004: 4,217). Linde Group personnel costs totalled EUR 1.842 billion for 2006.

Linde's acquisition of BOC was accompanied by a stringent and transparent selection and appointment process. Since Linde and BOC complement each other to a large extent in terms of regional footprint, personnel streamlining measures were relatively modest for an acquisition of this size.

### Employees by region

	2006	2005
Germany	7,176	7,133
Other Europe	20,506	8,752
North America	8,518	3,828
South America	2,674	1,850
Asia/Pacific	8,496	1,341
Africa	3,668	2
<b>Total</b>	<b>51,038</b>	<b>22,906</b>

In the first quarter (Q1) of 2007, around 52 percent of The Linde Group payroll was employed under collective bargaining agreements.

<sup>12</sup> For 2004 and 2005, the values stated here refer to the most significant HyCO plants, steam reformers, partial oxidation plants (PO<sub>x</sub>) and methanol crackers. Natural gas consumption in 2006 refers to steam reformers and PO<sub>x</sub> plants for BOC, and only to steam reformers for Linde.

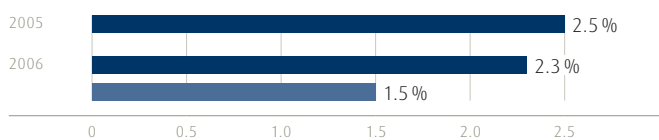
<sup>13</sup> The 2006 figures for the former BOC organisation is based on the data collected from around 90 percent of employees.

<sup>14</sup> The current figures for 2006 and 2005 differ in part to those stated in our 2006 Financial Report. The data here excludes KION Group values (see page 124). Since the only data available for 2004 includes the KION Group, figures from that year are not reported here to ensure comparability.

<sup>15</sup> The figures for 2007 apply to the reporting date 31 March 2007. No data was gathered for Iceland, Latvia or Lithuania. The figures are also based on different calculation methods for the number of employees, which means they cannot be realistically compared with previous years. The data applies to a 47,697 headcount of permanent employees.

In 2006, 1.2 percent of all employees at the former Linde organisation were apprentices and trainees, and 1.1 percent in financial year 2005. Around 2.6 percent of our staff were on limited contracts in 2006 (2005: 2.3 percent). The number of part-time employees at Linde was slightly lower in 2006 than the year before.

**Part-time ratio in percent**



■ Part-time ratio Linde (%).  
■ Part-time ratio BOC (%).

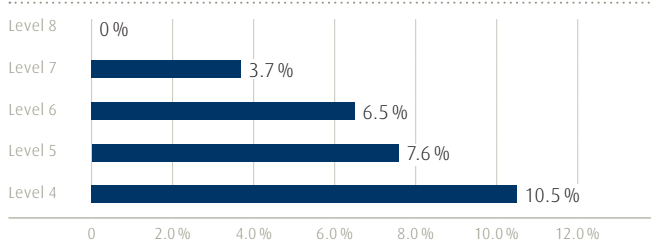
The proportion of contractors at The Linde Group was 2.3 percent in Q1 2007. The majority of workers from other companies that performed technical and other services for us were based in South Africa, Germany and India. In 2006, the proportion of contractors at Linde was 5.5 percent, up from 5.0 percent in 2005.

**Diversity**

Thanks to our merger with BOC, we are now active in over 70 countries across the globe, emphasising and strengthening our international focus. Integrating diverse cultures and fostering close communication between colleagues is a key objective of our HR development schemes (see page 046).

In the long term, we also aim to increase the proportion of women within The Linde Group. In the first quarter of 2007, around 21 percent of the Group's payroll was female. The number of women in management positions varies greatly according to the seniority level and decreases with increased levels of responsibility. In total, women hold around 8.3 percent of our executive positions. In Q1 2007, women accounted for 17.8 percent of the positions salaried above the regular pay scale.

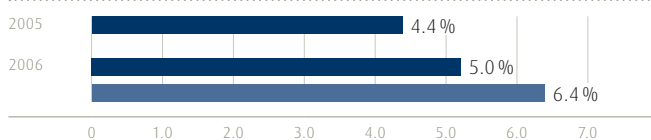
**Percentage of women by management level**



**Employee retention**

The global staff turnover rate at The Linde Group is currently around 11.6 percent.<sup>16</sup> This comparatively high rate is a result of extensive Group restructuring as part of the BOC integration. We are implementing a range of employee development measures to increase our retention rate in the future.

**Turnover rate**



■ Turnover rate Linde (%).  
■ Turnover rate BOC (%).

In 2006, the average length of service at BOC was 6.1 years, and 11.2 years at Linde (2005: 11.6).

**HR development**

The success of our company is built on the expertise of our staff. We are firmly committed to the ongoing development of our technical and social skills as this is a key enabler in the drive to achieve and sustain a leading role in the international market. On average, every Linde Group employee spent 3.9 days participating in devel-

<sup>16</sup> The turnover rate applies to the acquisition period from 1 June 2006 to 31 May 2007.



opment training in Q1 2007. In 2006, the corresponding value at the former Linde organisation was 1.6 days, with average training costs amounting to around EUR 383 per employee (2005: 1.7 days with costs at EUR 422).

As part of our HR development schemes, we carry out regular performance evaluations based on mutually defined targets. This fosters staff motivation and understanding of our strategic goals, strengthening our overall performance as a company. In Q1 2007, around 66 percent of our employees received a formal performance review.

## Economy

Our key financial figures<sup>17</sup> cover important aspects of economic sustainability. Further information on our performance in this area is available on page 005 and in our 2006 Financial Report, and you will find current figures for financial year 2007 on our website, → [www.linde.com](http://www.linde.com)

Since the data from 2004 was calculated using different accounting principles to the following years, we are only including the figures for 2005 and 2006 here to enable comparability.<sup>18</sup>

### Key financial figures

In financial year 2006, The Linde Group achieved sales of EUR 8,113 million.<sup>19</sup> This figure was up on the previous year, due to both the merger with BOC and rising demand for our products and services fuelled by a strong global economy. Robust growth rates in Asia and Eastern Europe and the upswing in more mature markets such as the USA and Europe have had a favourable impact on the gas industry.

#### Key financial figures in EUR million – continuing operations

EUR million	2006	2005
Sales	8,113	5,884
Gross profit on sales	2,721	2,105
Operating profit <sup>20</sup>	1,586	1,132
Earnings before taxes on income	363	605
Earnings after taxes on income	219	373

Over the past financial year, the Gases Division grew sales by 39.3 percent. Sales for the Engineering Division were up 14.8 percent on the corresponding figure for the previous year. Both the Gases and Engineering Divisions anticipate a further sales increase in financial year 2007.

<sup>17</sup> The key financial figures include BOC data from initial consolidation on 5 September 2006 to year-end.

<sup>18</sup> Unless otherwise indicated, the figures reported here refer to continuing operations (cf. Facts and figures, page 124) and therefore differ from the information on page 005.

Key figures for our affiliates are available from the Annual Report 2006, page 173 onwards.

<sup>19</sup> Total Linde Group sales including discontinued business operations amounted to EUR 12,439 million in 2006. Linde Group sales from January to June 2007 totalled EUR 5,888 million.

<sup>20</sup> Operating profit: EBITDA before non-recurring items, including our share of the income from associates and joint ventures.

**Sales by division in EUR million**

EUR million	2006	2005
Gases Division	6,195	4,448
Engineering Division	1,863	1,623

**Financial position**

The acquisition of BOC and sale of the KION Group significantly changed our net assets and financial position in financial year 2006. Linde Group equity grew from EUR 4,473 million in financial year 2005 to EUR 8,225 million in 2006.

The BOC acquisition increased our net debt from EUR 1,505 million to EUR 9,933 million at the end of financial year 2006. We have reduced this substantially during the current financial year, bringing the figure at 30 June 2007 down to EUR 6,977 million. We will continue to pay particular attention to this area in future.

However, we also intend to keep our investment strategy on track, making targeted investments in areas that offer growth potential and enhance the earnings power and competitiveness of the Group as a whole. Our investments<sup>21</sup> in 2006 totalled EUR 776 million (2005: EUR 673 million), with BOC accounting for EUR 224 million of that. As in previous years, the majority of our investments targeted the international expansion of our gases business (2006: EUR 808 million; 2005: EUR 671 million).

In 2006, our taxes on income amounted to EUR 144 million (2005: EUR 232 million).

**Research and development (R & D)**

As a technology group, innovations are crucial to our future success on the international market. Therefore in 2006, we continued to expand our research activities. We have over 828 employees researching and developing new products, services and technologies worldwide. The Linde Group also collaborates closely with universities, research institutes and industry partners (see page 036).

**Research and development costs in EUR million**

EUR million	2006	2005
Gases Division	72	61
Engineering Division	20	16

Alongside optimising and enhancing existing processes and applications, our R & D activities also focus on tomorrow's challenges such as securing a sustainable supply of energy.

In the Gases Division, we are conducting intensive research into future-orientated hydrogen technology. Our priority here is developing new methods of generating hydrogen from renewable energy sources. In the Engineering Division, our R & D focus is currently on enhancing various plant technologies. Here we are aiming to further reduce CO<sub>2</sub> emissions in customer production processes.

We envisage spending around EUR 140 million on research and development during financial year 2007.

<sup>21</sup> These investments do not refer to financial assets or to the acquisition of BOC.

### Shareholder structure by region and investor category

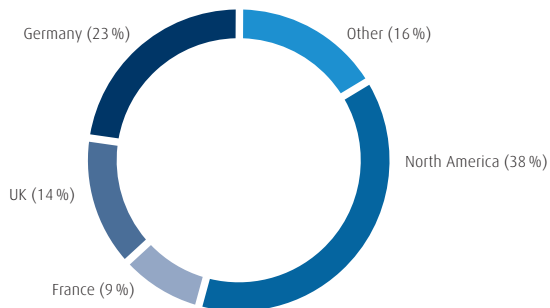
In 2006, around 53 percent of Linde shares were held by institutional investors, the majority of which (38 percent) are based in North America. Major shareholders accounted for 27 percent, while private investors held 20 percent of our shares.

We attach great importance to our shareholders' expectations and interests regarding our social and environmental performance, and commit to responsible conduct towards our shareholders in our Corporate Responsibility policy. We regularly review our CR measures in relation to our shareholder structure and provide targeted shareholder information about our strategies and activities (see page 026).

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#### Institutional investors – holdings by region

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# Global Reporting Initiative (GRI)

## Content Index

The Corporate Responsibility Report from The Linde Group is largely based on the Global Reporting Initiative (GRI). It complies with GRI's Application Level C guidelines. This was verified by the Institute 4 Sustainability in Berlin. At our request, the Institute checked our report for strengths and weaknesses. The results of that analysis, along with our 2005 Corporate Responsibility Report, are available at [www.linde.com](http://www.linde.com).

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4.15	Basis for identification of stakeholders	015, 030
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EC4	Significant financial assistance received from government	No data available
EC6	Policy, practices and proportion of spending on locally based suppliers	No data available
EC7	Proportion of senior management hired from the local community	No data available
EC8	Infrastructure investments and services provided primarily for public benefit	036 ff., 074 f., 086 f., 095 f., 099 f., 105 f., 118 f., 121 f.
	<b>ENVIRONMENTAL</b>	
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EN2, COP	Percentage of materials used that are recycled input materials	No data available
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EN18	Initiatives to reduce greenhouse gas emissions	052 f., 057 ff., 065 ff., 074, 081, 093 f., 101, 107, 112, 117 f., 121
EN19, COP	Emissions of ozone-depleting substances by weight	No data available

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EN21, COP	Total wastewater discharge	No data available
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LA7	Rates of injury, occupational diseases, lost days and absenteeism, and number of work-related fatalities by region	126 f.
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LA14	Ratio of basic salary of men to women by employee category	No data available
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HR1, COP	Investment agreements that include human rights clauses	No data available
HR2, COP	Percentage of suppliers that have undergone screening on human rights	No data available
HR4, COP	Incidents of discrimination	No data available
HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk	No data available
HR6, COP	Operations identified as having significant risk for incidents of child labour	No data available
HR7, COP	Operations identified as having significant risk for incidents of forced or compulsory labour	No data available
<b>SOCIETY</b>		
S01	Impacts of operations on local communities	No data available
S02, COP	Percentage of business units analysed for risks related to corruption	No data available
S03, COP	Percentage of employees trained in organisation's anti-corruption policies and procedures	No data available
S04, COP	Actions taken in response to incidents of corruption	No data available
S05	Lobbying activities	036 ff.
S08	Fines/sanctions for non-compliance with laws and regulations	No data available
<b>PRODUCT RESPONSIBILITY</b>		
PR1, COP	Life cycle stages in which health and safety impacts of products and services are assessed for improvement	049 ff.
PR3, COP	Principles/measures related to product information	049 ff.
PR6, COP	Programmes for adherence to laws, standards and voluntary codes related to marketing communications	032 ff., www
PR9, COP	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	No data available

Management approach	Economics	Environment	Product responsibility	Working conditions	Human rights	Society
<i>OBJECTIVES AND ACTIVITIES</i>	<i>Linde Financial Highlights, p. 005, Facts and Figures, p. 133 f.</i>	<i>Corporate Responsibility Roadmap, p. 018 ff., Facts and Figures, p. 124 ff.</i>	<i>Corporate Responsibility Roadmap, p. 018 ff., Facts and Figures, p. 124 ff., SHEQ, p. 048 ff.</i>	<i>Ethics &amp; Compliance, p. 032 ff., Employees, p. 044, Corporate Responsibility Roadmap, p. 018 ff.</i>	<i>Ethics &amp; Compliance, p. 032 ff., Employees, p. 044 ff., Corporate Responsibility Roadmap, p. 018 ff.</i>	<i>Corporate Responsibility Roadmap, p. 018 ff., Social Responsibility, p. 036 ff.</i>
<i>GUIDELINES</i>	<i>Corporate Governance, p. 022 ff., Ethics &amp; Compliance, p. 032 ff.</i>	<i>Corporate Responsibility Policy, p. 016 ff., SHEQ, p. 048 ff.</i>	<i>Corporate Responsibility Policy, p. 016 ff., SHEQ, p. 048 ff.</i>	<i>Corporate Responsibility Management, p. 012 ff., Ethics &amp; Compliance, p. 032 ff.</i>	<i>Corporate Responsibility Management, p. 012 ff., Ethics &amp; Compliance, p. 032 ff.</i>	<i>Social Responsibility, p. 036 ff., Corporate Responsibility Policy, p. 016 ff.</i>
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COP = Communication on Progress, Global Compact principles. Refers to policy guidelines, programmes and management systems already introduced by Linde that support the ten Global Compact principles. These items include an explanation of the measures undertaken during the period under review and the concrete results of those measures thus far.

AR = Annual Report 2006

RBU = RBU chapter, starting on pages 056, 064, 072, 078, 084, 090, 098, 104, 110, 116, 120

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On request, we would be pleased to forward additional information about Linde free of charge.





# → Glossary

## **Bivalent hydrogen-powered combustion engine**

A vehicle engine may be powered by a combination of different drive concepts or energy sources. Here, the term refers to a flexible combustion engine that can switch between hydrogen and petrol as the fuel.

## **Codes of best practice**

Also known as best practices, these codes document the most effective ways of accomplishing tasks. Codes of best practice draw on the experiences of successful companies to set out policy guidelines that contribute to reaching defined goals.

## **Defined benefit plan**

A pension plan under which an enterprise/employer defines an amount of pension benefit to be provided, usually as a function of one or more factors such as age, years of service or remuneration. In consequence, actuarial risks and financial risks fall on the employer.

## **Defined contribution plan**

A pension plan under which an enterprise's/employer's legal or constructive obligation is limited to the amount that it agrees to contribute to a separate entity (e.g. an insurance company). Thus, the level of benefits received by the employee is determined by the level of contributions paid by the enterprise (and if applicable also by the employee) together with investment returns arising from the contributions. In consequence, actuarial risks and investment risks fall on the employee.

## **Econsense – Forum Nachhaltige Entwicklung der Deutschen Wirtschaft e. V. (Forum for Sustainable Development of German Business)**

Cross-sector network of German companies and organisations with global operations, focusing on corporate social responsibility and sustainable development issues. The company network was founded in 2000 as an initiative by the Bundesverband der Deutschen Industrie e. V. (Federation of German Industry, or BDI).

## **GHS**

GHS stands for Globally Harmonised System of Classification and Labelling of Chemicals. The system uses internationally standardised classification and warning symbols in an effort to minimise danger to human health and the environment in the manufacture, transport and application of chemicals. In the European Union, GHS will be introduced as an EU directive in parallel with the REACH chemicals system. The Commission approved the proposed directive on 27 June 2007.

## **Global Reporting Initiative (GRI)**

International initiative bringing together numerous stakeholders, founded in 1997 with the aim of generating recognised, comparable guidelines for corporate reporting on economic, social and environmental activities.

## **HyCO plant**

Collective term for plants producing hydrogen, carbon monoxide and synthesis gas. These HyCO plants primarily comprise steam reformers, partial oxidation plants and methanol crackers.

## **Key performance indicators (KPI)**

Operating metrics that allow measurement and/or evaluation of progress and performance levels in relation to important targets or critical success factors within an organisation.

## **LIPROTECT® customer programme**

Linde safety concept for plant operators, ensuring the safe handling of gases. LIPROTECT® offers a comprehensive range of services related to gas delivery, ranging from risk assessment through status and compliance tests to generating explosion-prevention documents. It covers inspection, maintenance and repair activities, as well as a range of safety training courses, tailored to customer requirements.

**LNG**

Liquefied natural gas. Thanks to its high energy density, uniform heating characteristics and high purity, this is a promising fuel for the future.

**Partial oxidation (PO<sub>x</sub>) plant**

Partial oxidation plants are used to produce synthesis gas and hydrogen. This sophisticated process primarily uses heavy hydrocarbons such as naphtha or refinery residues, combining them with oxygen or air. In steam reforming, process steam is mixed into the feedstock at very high temperatures to convert it into carbon monoxide (CO) and hydrogen (H<sub>2</sub>). Partial oxidation plants are generally found where heavy hydrocarbons are available cheaply or need to be disposed of (e.g. refineries).

**REACH**

REACH stands for Registration, Evaluation and Authorisation of Chemicals, and is an EU directive passed in December 2006 to reform European chemicals legislation. It came into force on 1 June 2007 and stipulates that within the EU, the health and environmental impact of chemical substances must be tested and registered as of an annual production or import volume of one tonne.

**EURO4 and EURO5 emissions standards**

EU directives stipulating emissions limits for new vehicles. These apply to a number of different hazardous substances such as carbon monoxide, nitrogen oxides, hydrocarbons and particulate matter. The limits differ according to engine and vehicle type. The EURO4 standard has been in force since 1 January 2005, while EURO5 will be applicable from 1 September 2009.

**SHEQ**

Acronym for Safety, Health, Environment and Quality.

**Six Sigma**

Systematic and stringent methodology for ongoing process improvement in companies. The aim here is to reduce potential errors in all workflows and processes to a minimum, while increasing quality and therefore customer satisfaction.

**Steam reformer**

Steam reformers are plants for the production of synthesis gas, a mixture of carbon monoxide (CO) and hydrogen (H<sub>2</sub>). Light hydrocarbons such as natural gas are usually used as feedstock here and converted to CO and H<sub>2</sub> by catalysis using hot water vapour. In a further process step, the water vapour is used to transform the CO into carbon dioxide (CO<sub>2</sub>), which also generates additional hydrogen. This gas mixture is then purified to remove the CO<sub>2</sub> and other unwanted ingredients.

**UN Global Compact**

The UN Global Compact is a global corporate citizenship initiative for businesses that are committed to aligning their operations and strategies with UN Global Compact goals in the areas of human rights, labour, the environment and anti-corruption.

**VOC**

Volatile organic compounds. This describes various different compounds that are usually used as solvents in paints and varnishes. They are major precursor substances in the formation of ground-level ozone.



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