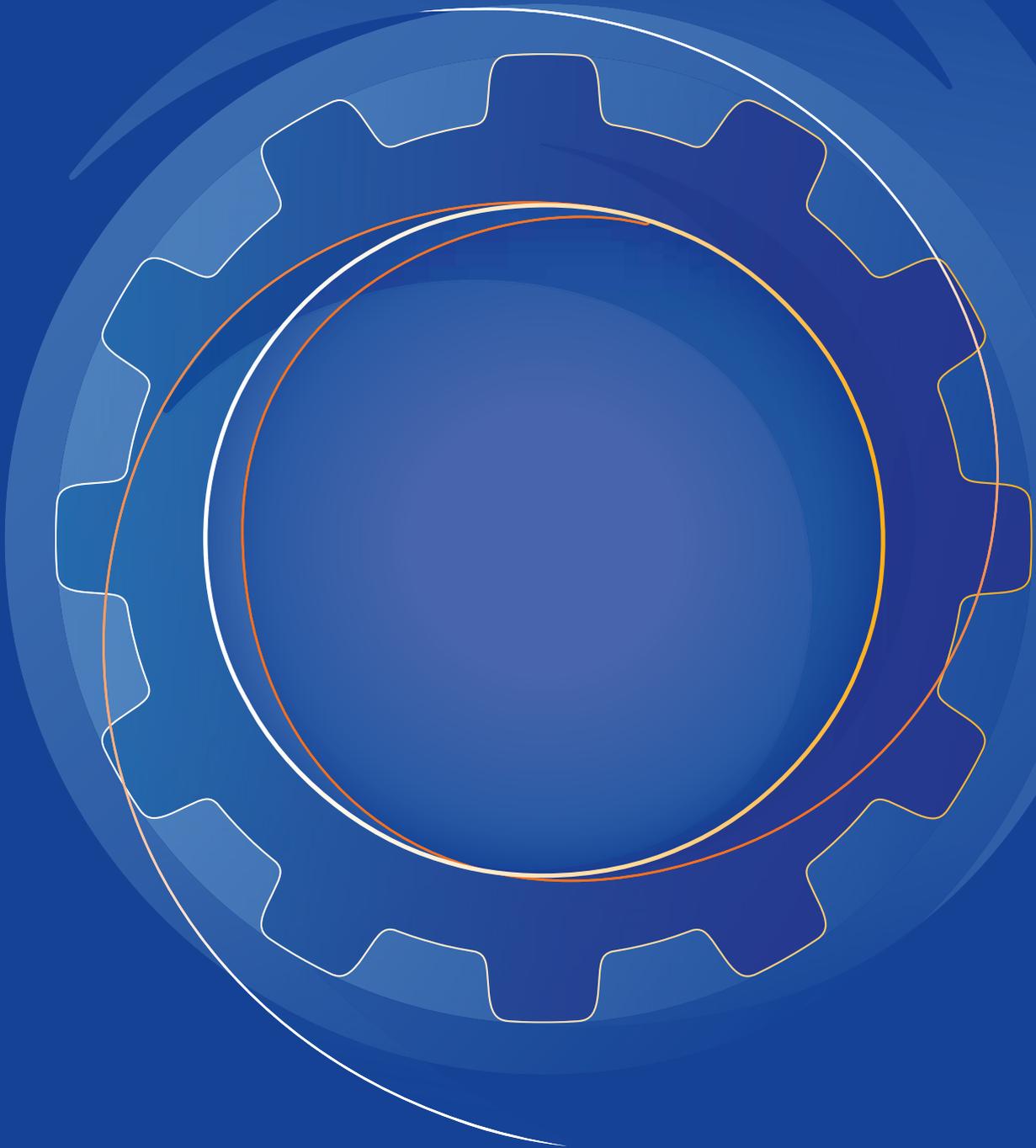


Orkla  
EHS Report 2008



The purpose of this report is to give readers the best possible insight into Orkla's approach to environment, health and safety (EHS), and the status of the Group's efforts in this field. Orkla defines EHS work in a broad sense, and consequently climate protection is an important aspect of its environmental efforts.



**OPTIMAL PACKAGING SOLUTIONS**  
 Many Orkla Brands companies have worked for years to find optimal packaging solutions that provide adequate protection for the product while minimising environmental impacts.



**ENVIRONMENT- AND ENERGY-EFFICIENT PRODUCTS**  
 Silicon and Microsilica® are examples of Elkem products that contribute positively to the state of the environment. Most of Borregaard's wood-based products are environmentally sustainable and offer alternatives to products based on non-renewable materials.



**EHS AS A FUNDAMENTAL STRATEGIC PILLAR**  
 Environment, health and safety are one of Sapa's fundamental strategic pillars. Sapa has reduced the incidence of serious accidents by over 60 % since its profile operations were merged with Alcoa's profile business in June 2007.



**GREEN INVESTMENTS**  
 This business area has built up expertise on investments in environment-related projects, and the Share Portfolio staff includes analysts specialised in green investments. Orkla Finans focuses on power and energy, as well as on the CO<sub>2</sub> emissions quota market.

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# Zero harm to people or the environment

Our vision of zero harm to people or the environment must be absolutely key to everything that Orkla does. Efforts must be made in every part of our organisation to focus purposefully and systematically on preventing adverse effects.

Orkla's zero vision is not just a moral obligation, it is also a prerequisite for efficient, profitable operations. The fundamental precondition for sustainable value creation is a good, safe work environment. This means that our activities must be well organised, so that we can operate without risk to life or health, and can make optimal, productive use of our workforce.

Orkla still faces many challenges in terms of preventing negative impacts on people and the environment. Some of our companies have made a great deal of progress, while others still have a way to go. There must be full focus on preventive efforts in every part of our operations. This is a management responsibility, but every Orkla employee has a responsibility for actively engaging in efforts to avert and prevent injury and adverse effects.

Environment, health and safety (EHS) performance is a value driver at Orkla, as identified in Orkla's Goals and Values. Consequently, EHS must be an integral component of Orkla's business operations.

Day-to-day EHS work is carried out primarily at the local level, but benchmarking and the introduction of best practices are important aspects of EHS activities at Orkla. Orkla has become increasingly proficient at exchanging lessons learned and making EHS improvement a cross-cutting objective in every company and business area of the Group.

At Orkla we have defined EHS in a broad sense. This means that climate protection is an important focus in our environmental work. Our aim is to reduce our emissions and minimise our energy consumption. Orkla is also investing heavily in solar energy through Elkem Solar and REC.

Orkla will engage in sound, long-term, sustainable operations, reflecting recognition of our responsibility for our employees, society at large and the environment. Our vision of zero harm is universal and applies wherever in the world we operate.



*Dag J. Opedal*

Dag J. Opedal  
President and CEO  
Orkla ASA

# EHS work at Orkla

Orkla has wide-ranging responsibility for ensuring that its businesses are properly operated, as affirmed in the Group's environmental policy: Orkla is committed to sound, long-term, sustainable operations that reflect the Group's awareness of its responsibility towards its employees, society at large and the environment.

Orkla's value statement, Goals and Values, establishes environment, health and safety (EHS) as one of the Group's main value drivers. Our vision of zero harm defines an objective that all our employees must strive to achieve.

A safe working environment for employees, contract workers and suppliers is a fundamental prerequisite for sustainable value creation. Orkla has undertaken to operate in compliance with the principles enshrined in the UN Global Compact, and will conduct itself with respect and awareness of its responsibility for people, society and the environment in all fields and in all parts of the world.

Purposeful focus on improving our EHS performance is crucial to achieving safe, efficient operations, and continuous efforts are made to bring home the importance of EHS in every part of our organisation. There is a close correlation between a good EHS performance and value creation. Our employees are our most important resource for achieving our vision of zero harm.

In practice, this means that Orkla focuses on many areas. Within our own organisation we work continuously to promote a corporate culture in which effective, preventive EHS efforts are a main pillar. The precautionary principle must imbue all our decisions and activities. It also means that we provide clear and candid information about our EHS work and engage in active dialogue with our stakeholders on various EHS issues.

Each business area carries out EHS activities in compliance with local and national requirements. Line responsibility must be clearly defined in each



company, and preventive efforts must have high priority at each workplace.

## Risk management

Risk assessments are a key element of EHS work. Some parts of Orkla's production operations entail a high level of inherent risk with regard to the environment, health and safety. The company carries out preventive EHS work by means of continuous risk assessments, good control procedures and regular safety audits to safeguard its employees, the environment and property. The companies in the Orkla Group must identify factors that can entail significant consequences for people, the environment and the company. An EHS risk picture with the ten most important risk factors and associated measures to mitigate risk is presented in connection with the annual

reporting process.

At Orkla we apply the Precautionary Principle in all our operations. Effective, coherent risk management plays a pivotal role in all areas of the Group.

A good risk culture ensures compliance with procedures and rules, and is essential if risk management is to be a natural part of day-to-day operations. A practical management tool makes this process feasible and readily understandable by effectively supporting documentation, monitoring and reporting of risk information. Orkla operates in sectors where production processes sometimes entail high inherent EHS risk, such as at smelting plants. Risk must be reduced to the greatest possible extent. This is what we call the prudence principle. Never-

## EHS work at Orkla



theless, people have sometimes been injured, and lives have even been lost. This is a great tragedy each time it happens. We will do our utmost to avoid such situations, and we have a zero vision: no serious injuries and no harm to the environment.

### The EHS management system

Responsibility for EHS performance is decentralised at Orkla, which means that the management staff of each company are responsible for initiating, planning and carrying out EHS activities as part of the company's normal operations. Each line manager is also responsible for ensuring that the company complies with the requirements imposed by national legislation.

The Executive Vice President for Corporate Functions has the overall responsibility for coordinating EHS work at Orkla. Corporate Affairs is responsible for preparing the Group's EHS report, and for drawing up general guidelines and coordinating work relating to EHS issues. The Human Resources departments in

the various business areas are responsible for reporting on sickness absence and injuries.

At Orkla there are EHS/environmental coordinators both at business area level and in the individual companies. Coordinators at business area level coordinate company activities and are responsible for preparing an annual report on these activities. The EHS/environmental coordinator in each company plays a key role in planning, implementing and reporting on efforts to meet challenges related to the environment, health and safety. At factory level, environment, health and safety officers assist the plant management in day-to-day EHS/environmental work.

### Environmental policy

Orkla is committed to sound, long-term, sustainable operations that reflect the Group's awareness of its responsibility towards its employees, society at large and the environment. Everyone must feel confident about buying Orkla products with regard to both the origin and quality of the products and their impact on human beings and the environment.

We therefore work purposefully to:

- economise on our consumption of raw materials, water and energy and prevent adverse environmental effects
- identify and assess the environmental impacts that we cause and reduce these impacts by implementing effective, long-term solutions
- create safe, healthy and attractive workplaces and minimise any negative effects of our operations on the local environment
- ensure that environmental aspects are taken into account when new products are developed and suppliers are chosen
- provide information about our environmental activities in an open, trustworthy manner and maintain an active dialogue on various environmental issues with stakeholders

Each business unit is responsible for defining goals and preparing activity plans, establishing systems and control procedures, and carrying out and reporting on its environmental activities. Compliance with national legislation and local regulations is a minimum requirement. Employees must be made aware of their environmental responsibility and be involved in environmental activities at their workplace.

Orkla's environmental policy was adopted by the Group Executive Board on 26 April 2004.

# Pushing back boundaries with new solar technology



Elkem Solar is distinguishing itself in several environmental fields. Its new factory in Kristiansand is able to produce solar-grade silicon using 75% less energy than any other comparable technology currently available. Solar cells containing Elkem Solar Silicon® (ESS) will produce electricity for 25-30 years, with zero greenhouse gas emissions.

Why didn't the solar industry take off until just a few years ago? Meeting the climate challenge requires large amounts of renewable energy. Several countries provide substantial subsidies for the establishment of solar power plants. Until now, the production of solar-grade silicon has been energy-intensive and cost-ineffective. However, new technologies are now being developed to reduce energy consumption and lower production costs.

As awareness of the environmental crisis facing our planet increases, more and more countries are likely to offer government subsidies to companies and households that install solar panels.

## Shorter energy recovery time

The myth that solar cells never produce enough energy to recoup the energy

expended during their production has long since been disproved.

Elkem's production process is a technological quantum leap towards more energy-efficient production of super-clean silicon for use in solar cells. Elkem Solar is setting new recovery-time records – it now takes only two months to recoup the energy that Elkem Solar invests in a solar cell.

"It takes just over a year for a solar cell made with Elkem Solar material to become energy-neutral. The solar cell then generates "free" energy for the next 25–30 years," explains Jens Christian Fjellidal, Environment, Health and Safety Manager at Elkem Solar.

He elaborates further on the energy-recovery-time figures, which relate to

## Solar technology



solar cells installed in Southern Europe. “Solar cells containing silicon produced using rival technologies take a year to recoup the energy expended to produce the solar-grade silicon, meaning a total energy-recoupment period of almost two years.”

### Pioneer spirit

The solar adventure began 30 years ago at Elkem Fiskaa in Kristiansand, when Elkem and key players in the budding solar cell industry invested in a number of major projects. Elkem saw the potential of producing electricity from the sun, and therefore focused on honing its expertise relating to the purification of silicon to solar-grade quality. In autumn 2006, Orkla invested billions of kroner in the construction of a factory in Kristiansand, which is now in the start-up phase. Production of Elkem Solar Silicon® will be ramped up in the course of 2009.

### The adventure continues

ESS has been tested as a raw material, or feedstock, by several of the largest solar cell manufacturers in the world. Q-Cells, one of Elkem Solar’s primary customers, has now approved Elkem Solar’s solar-grade silicon for use in its solar cells, as a fully-purified material.

“Solar cells made of Elkem Solar Silicon® yield as much energy as solar cells made of silicon produced by the rival Siemens process. Moreover, our R&D department has proved that the yield from ESS can potentially be increased even further in future,” relates Ragnar Tronstad, Technology Director at Elkem Solar.

### High pace

Elkem Solar will maintain its current high pace to keep up with its competitors. The company’s research staff has also identified potential improvements to the production process, which will reduce costs at new factories.

And the energy effect of the solar cells? At present, one year’s production of ESS installed as solar cells in Spain produces 900 GWh of electricity, or enough to supply 45,000 households. The solar cells last for 25–30 years, and emit no greenhouse gases. It will be exciting to see how many households will benefit from Elkem Solar’s technology in the future.

**Text:** Betzy A.K. Thangstad,  
Senior Communications Advisor, Elkem

### Advantages of Elkem Solar Silicon®

- Lower energy consumption during production
- Lower CO<sub>2</sub> emissions during production
- Reduced energy-recoupment period for installed solar cell modules
- Lower production costs
- Potential reduction in investment costs linked to factories producing solar-grade silicon

### Elkem Solar

- Production of Elkem Solar Silicon® takes place in five processing stages: metallurgical silicon, slag refining, leaching, solidification and post-treatment
- The new factory has cost NOK 4 billion
- The factory will have an annual production volume of 6,000 tonnes
- Employs 270 persons

# Borregaard LignoTech reaches safety milestone

Borregaard LignoTech has reached a milestone in its efforts to promote safety. On 14 December 2008 the company recorded a Lost Work Day Rate of zero, which means that there were no injuries leading to absence in the last 12 months.

"These good results can be ascribed to commitment, increased awareness and high safety standards that we have implemented throughout our organisation. We have worked systematically to change attitudes and behaviour to achieve our targets," relates George Marshall, Manufacturing Director at Borregaard LignoTech.

## Order and a systematic approach

The safety programme at Borregaard LignoTech has been carried out in several stages, beginning with a focus on

housekeeping and a systematic approach in the working environment.

"We started out by conducting second-party audits, in which representatives from other parts of the LignoTech system assessed the various units and proposed improvements. We also encouraged each unit to use recognised local EHS consultants to carry out third-party audits. The Board of Directors of each factory conducts inspection rounds at the plants before their meetings, and each unit must draw up annual plans for EHS activities, which are followed up by the



## Borregaard LignoTech

central administration,” explains the Manufacturing Director.

### Recording near-miss incidents

Secondly, it has been important to observe and understand the way people work, and to look at near-miss incidents. “In 2004 we began the process of paying more attention to and increasing our reporting of near-miss accidents. This entailed getting employees to understand the necessity of reporting incidents that could have resulted in an accident. In addition, safety inspections were carried out by the management and a safety committee comprising managers, EHS coordinators and safety delegates elected from among the employees. The purposes of the safety inspections was to observe and uncover unsafe actions or working conditions,” says George Marshall.

The main objective of stepping up efforts to record near-misses was to pro-actively identify the causes of potential accidents. “One of the things we learned was that working conditions had been improved to such an extent that most accidents were due to incorrect behaviour. In other words, in order to reduce the injury frequency rate we had to focus on changing the organisational culture and employee behaviour,” Marshall points out.

### Changing behaviour

With this important lesson in mind, Borregaard LignoTech could really get to work on changing on-the-job attitudes and behaviour. Among other things, this meant improving safety standards and involving the employees more actively in dialogues concerning safety issues. “96 % of all accidents are caused by human error. That is precisely why behavioural change plays such a key role in our safety work,” says Marshall.

### Commitment

The main obstacle to the success of the safety programme is competition from other high priority activities. Borregaard LignoTech is now continuing to pursue its focus on safety.

“We must constantly remind one another of our goals and how important it is to reach them within the defined time frame. We must make sure that our employees understand the consequences of their own actions, and know what they can do to avoid dangerous situations. The entire project depends on everyone having a sense of personal responsibility for, and commitment to, safety,” concludes George Marshall.

#### Text:

Tone Horvei Bredal, Communication Manager  
at Borregaard

Endre Steinbru, Communications Officer at Borregaard

### Borregaard LignoTech

Borregaard LignoTech is the leading global supplier of lignin-based binding and dispersing agents. The wood-based agents are an environmentally sound alternative to oil-based products. Borregaard LignoTech has a total of around 450 employees at eight production facilities in Norway, the Czech Republic, Brazil, Spain, the USA, South Africa, Germany and the UK.

# Good health contingent on a good psychosocial environment

A good psychosocial work environment is key to preventing sickness absence. The occupational health service at Orkla Brands Nordic has been focusing on this issue for many years.

Kristian Vetlesen, senior occupational physician at Orkla Brands Nordic and President of the Norwegian Association of Occupational Medicine (NAMF), is keen to improve work environments, and psychosocial work environments in particular, in order to reduce sickness absence permanently. Close follow-up of persons on sick leave is important, but insufficient to achieve a lasting effect.

“Like the physical work environment, the psychosocial work environment has an impact on health. The company’s occupational health service has become far more aware of this fact, and wants to assess employees’ psychosocial work environment, as opposed to administering blood tests and measuring blood pressure.”

## Control of the work situation

Good models and instruments have been developed for studying the connection between the psychosocial work environment and health, and to measure degrees of stress. Karasek & Theorell’s stress model has been influential. This model considers the links between work demands, control/learning in the job situation and social support.

“We used to think that occupational stress was simply a question of having a lot to do. Today we know that the degree of stress has much more to do with employees’ perceptions of how much control they have and how much they learn in their job. If you work a lot, but nevertheless have control over the work and the opportunity to develop your skills, you also have a sense of mastering the situation. This is motivating, and will moderate your perception of stress,” says Vetlesen. “Other important factors are that you receive social support from your man-



ager and colleagues, feel that you are appreciated, and feel that you are treated fairly by human resources staff. These are universal factors that apply across occupational groups and job levels,” he adds.

## Systematic surveys

Orkla Brands Nordic’s occupational health service has surveyed the psychosocial work environment for many years, by means of questionnaires completed in connection with employee health checks. Vetlesen now also sees greater management focus on this issue.

“This is particularly important in a large group like Orkla, which will always be undergoing organisational changes and major processes. Such processes must be carried out in an appropriate way, and not take an unnecessarily long time or create uncertainty, which can contribute to poor health among employees.”

He says that awareness of the psychosocial work environment has also prompted innovative approaches, for example in connection with the work situation of operators in the production plants.

“Emphasis used to be placed on job rotation to ensure task variation. However, it turned out that the work operations on the various lines were often very similar, and didn’t provide much of a change. Now there is a focus on enabling assembly line workers to master their workplaces, and on giving them full training in the machinery they operate. This gives them control of their job sit-

uations, as well as learning opportunities and motivation,” says Vetlesen.



## Complex picture

The senior occupational physician believes that it has generally become much easier to talk about the psychosocial work environment since he started working as a company doctor in the 1980s.

“People used to think that it meant being nice to each other at work, or whether your boss was good or bad. Today we know that the issue is complex, and that the psychosocial work environment has a significant impact on motivation, efficiency, job enjoyment and health. Major surveys have shown that high demands and high job pressure, combined with a low degree of control and on-the-job learning, can constitute a significant health risk. Among other things, it can increase the risk of heart disease, and can in fact be as great a risk as high cholesterol levels,” he says.

**Text:**  
Kari Westersund  
Consultant Corporate Communications, Orkla Brands

# Energy and climate



One of the consequences of Orkla's industrial operations is the consumption of substantial amounts of energy, which is a necessary input factor in the production processes.

Energy consumption in 2008 totalled 11.1 TWh, 27 % lower than in 2007. This decline is ascribable to the agreement between Orkla and Alcoa to swap assets in two jointly owned companies, Sapa Profiles and Elkem Aluminium. Elkem Aluminium is defined as discontinued operations and is not included in the financial statements. Electricity accounted for roughly 65 % of total energy consumption in 2008. Elkem and Borregaard's own plants generated around 3.75 TWh of electricity from hydropower in 2008.

All Orkla's businesses carry out energy-saving and investment projects on an ongoing basis to cut energy consumption and maximise the use of renewable energy. Energy management is an integral part of EHS work. The emphasis is on reducing oil consumption, either through efficiency improvement measures or by switching to other sources of energy for heat production.

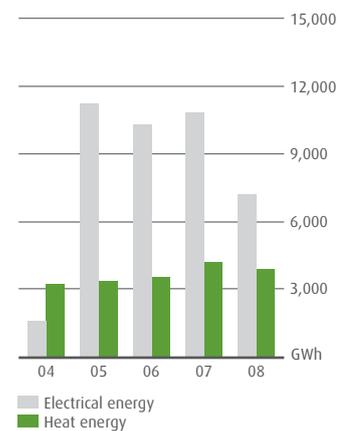
## Energy-efficiency

A variety of energy-efficiency initiatives and investments have helped to achieve a continuous reduction in energy consumption. Many of Orkla's production plants have initiated and carried out

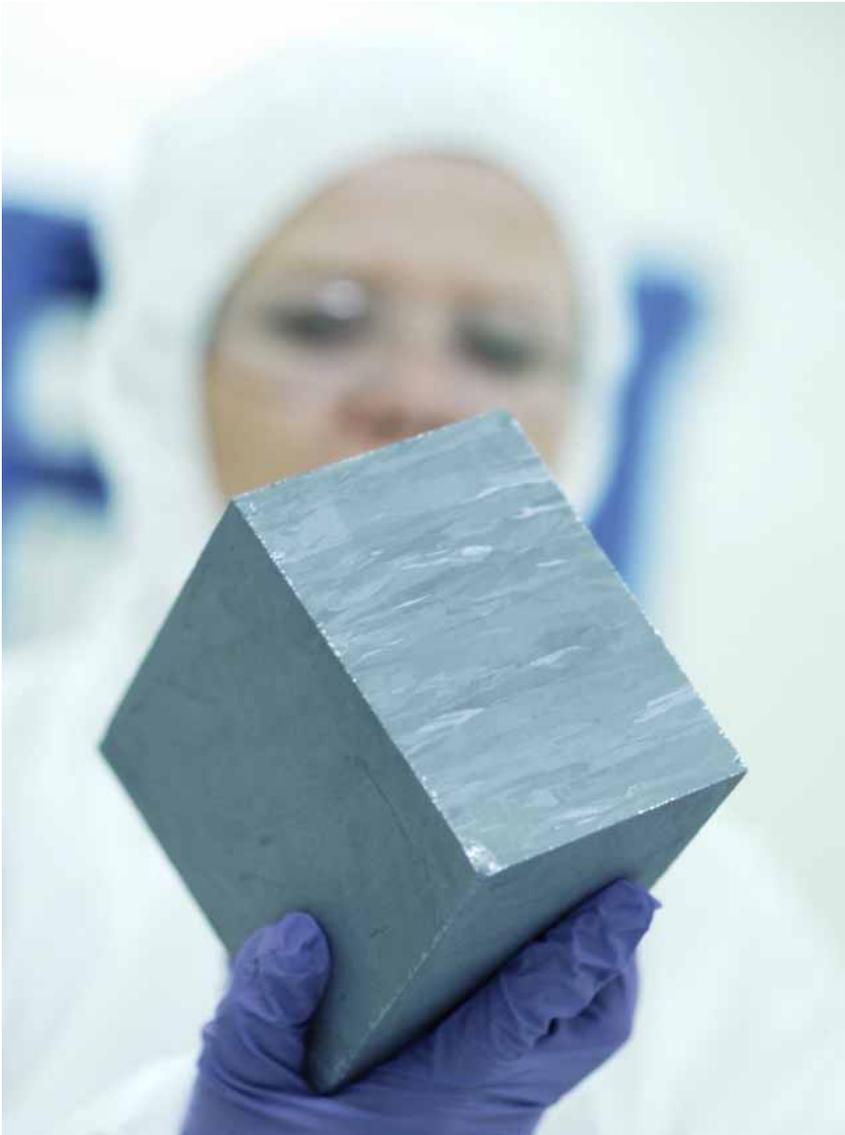
projects aimed both at optimising energy utilisation in their own operations and exploring the potential use of energy in the local community in the form of district heating. These are a few examples:

- Hafslund has begun work on building a new waste incineration plant on Borregaard's factory site in Sarpsborg. The plant is expected to produce 200 GWh of steam for delivery to Borregaard in 2010. This will also reduce greenhouse gas emissions by around 50,000 tonnes.
- Elkem and Orkdal Fjernvarme have signed an agreement regarding the delivery of waste heat from Elkem's smelting plant at Thamshavn. With the present technology, it will initially be possible to supply up to 12 GWh/year of heat, but this is eventually expected to increase by up to 30 GWh/year.
- Elkem has made major investments in renewable energy sources in Norway. Work on extensively upgrading the Elkem Saudefaldene power plant was completed and the plant was ready to start up in autumn 2008. The NOK 1.9 billion development of the Saudavassdraget hydropower plant will increase production by 600 GWh, equivalent to the energy consumption of 30,000 households.

CONSUMPTION OF ENERGY



## Energy and climate



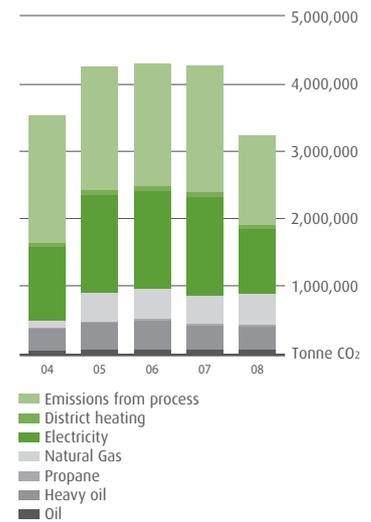
Improving energy efficiency is perhaps one of the most important ways of reducing greenhouse gas emissions in the short term, but the development of alternative energy sources is clearly also crucial to the effectiveness of climate-related efforts. In the past few years, Orkla has invested heavily in solar energy, based on the Group's silicon expertise and its extensive research in the field of metallurgy. Some of Orkla's other products, such as aluminium, lignin and Microsilica®, can also be instrumental in lowering energy consumption and thereby reducing emissions.

### Carbon footprint

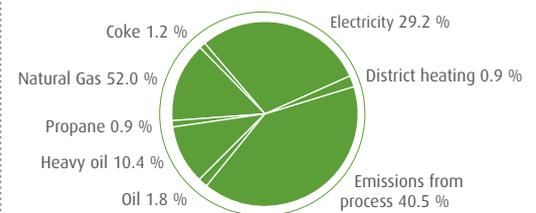
Orkla analyses its carbon footprint and has plans in place to implement appropriate measures. The Group applies its expertise and know-how to improving and developing processes, production and products so as to mitigate and limit any adverse effects on the environment. In 2008 Orkla continued to invest substantial resources in acquiring more knowledge of climate challenges and how they affect the Group. Necessary action and potential measures were considered.

Orkla believes it is crucial to develop

TOTAL CO<sub>2</sub>-EMISSIONS FOR ORKLA ASA 2004-08



ALLOCATION OF CO<sub>2</sub>-EMISSIONS FOR ORKLA ASA 2008



## Energy and climate

realistic goals and strategies for the Group's efforts to reduce its impact on the climate. This is a comprehensive, time-consuming process. Orkla has therefore begun by adopting a broad-based approach, and has entered into collaboration with several external research centres and specialist groups in order to expand its knowledge base. The aim is to conduct life-cycle analyses, in which adverse impacts on climate are analysed and documented throughout the value chain with a view to formulating specific objectives and plans for reducing greenhouse gas emissions.

At Orkla Brands, for instance, a feasibility project has been carried out to identify the impacts on climate at each stage of the value chain, from the cultivation and production of biological raw materials to the production of packaging used in the manufacture of food products. Based on this project, decisions will be made regarding future prioritisation or adaptation of measures to reduce greenhouse gas emissions.

### Climate accounting

There are no clear principles or guidelines for the preparation of overall climate accounts, but Orkla has chosen a system

of corporate greenhouse gas (GHG) accounting and reporting that is based on the international standard, the Greenhouse Gas Protocol. GHG emissions from Orkla's own operations totalled 2.25 million tonnes of CO<sub>2</sub>-equivalents in 2008, which is 18 % lower than emissions in 2007. This decline is largely ascribable to the asset swap agreement between Orkla and Alcoa.

GHG emissions from Orkla's production processes stem primarily from Elkem's production. As a result of continuous focus on process and operational improvements, emissions of CO<sub>2</sub> and other greenhouse gases are approaching a theoretical minimum level. Emissions from Sapa, Borregaard's factories and Orkla's other operations derive largely from the production of thermal energy from fossil energy carriers.

Orkla's climate accounts for 2008 include emissions from purchased energy, which brings CO<sub>2</sub> emissions to a total of 3.28 million tonnes. Purchased energy accounts for approximately 26 % of total emissions.

### Climate accounting

Orkla reports its greenhouse gas (GHG) emissions within scopes 1 and 2 of the Greenhouse Gas Protocol. Separate emissions inventories have been prepared for Orkla ASA, as well as for the business areas and business units.

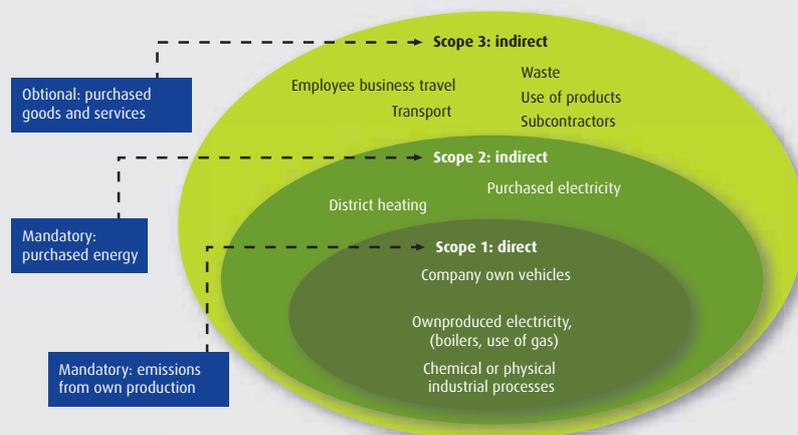
The inventories are drawn up on the basis of historical data from 2004, which have been updated to include emissions generated by electricity consumption and district heating, and reported as CO<sub>2</sub>-equivalents.

Country-specific emissions factors for electricity and district heating have been computed for all the 29 countries in which Orkla operates. In order to calculate these factors, information was collected on the countries' specific power production mix. The following sources were used in this process: International Energy Agency (IEA) Energy Statistics, Nordel (a body for cooperation between the Nordic transmission system operators Statnett (Norway), Svenska Kraftnät (Sweden), Fingrid (Finland) and Energinet.dk (Denmark) and the UK Department of Environment, Food and Rural Affairs (DEFRA).

The factors are calculated on the basis of the actual production mix, taking account of imports and exports.

### Methodology

Orkla ASA's climate accounting is based on aggregate energy consumption related to the Group's operations. The accounting shows inventories of CO<sub>2</sub> emissions measured in CO<sub>2</sub>-equivalents. The inventories are based on the Greenhouse Gas Protocol, the foremost international standard for measuring greenhouse gases, which was developed by the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD). The GHG Protocol consists of two corporate accounting standards that explain how to quantify and report greenhouse gas emissions, and in 2006 served as the basis for the ISO 14064-1 standard for GHG accounting and verification. The GHG Protocol bases its accounting and reporting system on three "scopes" or categories of emissions, and distinguishes between direct and indirect emissions. The reporting covers the following greenhouse gases: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulphur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), which are translated into CO<sub>2</sub>-equivalents.



# Environment, Health and Safety

Through Orkla's Goals and Values, environment, health and safety (EHS) have been established as an important value driver.

Targeted EHS activities are necessary in order to achieve safe, effective operations, and continuous work is being done to ensure recognition of the importance of EHS in all parts of the organisation. All Orkla employees must strive to achieve the goal of zero harm in Orkla companies. A safe working environment for employees, contract staff and suppliers is a fundamental prerequisite for sustainable value creation. Orkla is committed to operating in accordance with the principles enshrined in the UN Global Compact. The Orkla Group must conduct itself with respect and responsibility for people, society and the environment in all areas and in all parts of the world.

Orkla operates in very different sectors, using different production methods and in different cultures. This entails a variety of challenges and EHS risks, but also opportunities. Work on EHS primarily takes place at the local level in individual companies, but benchmarking and learning throughout the organisation are important. Consequently, a corporate staff function was established in 2008 to promote network-building and focus within the Group.

Orkla will develop a strong EHS culture by encouraging correct behaviour and attitudes. This requires stronger focus and commitment, good planning, and willingness to learn and improve.

Risk assessments are a key element of EHS activities. Orkla companies must identify factors that can have significant consequences for people, the environment and the Group, and promote focus on continuous improvement. An EHS risk picture and the ten most important risk factors, with associated measures to mitigate risk, must be reported each year for each unit.

Despite the strong focus on preventing occupational accidents, there were unfortunately serious incidents in Orkla in 2008. The most serious one was a

car accident in which a sales representative in Latvia was killed while driving on business.

In 2008 the Lost Work Day Rate (LWDR) was 6.2 injuries leading to absence per million hours worked, compared with 7.2 in 2007. This result is still unsatisfactory, but it shows the importance of increased focus and that even greater emphasis on behaviour is necessary if Orkla is to succeed in achieving its vision of zero injuries.

Sickness absence in the Orkla Group was 3.4 % in 2008, while the corresponding figure for 2007 was 4.2 %. The rules for registering sickness absence and follow-up vary from one country to another. In Norway, Orkla complies with the principles of an inclusive work environment with active follow-up of absentees and cooperation with the company health service. Similar principles will also be applied in the rest of the Group and in other parts of the world. Sickness absence for the Norwegian companies was 5.7 %, which is an improvement compared with 6.5 % in 2007.

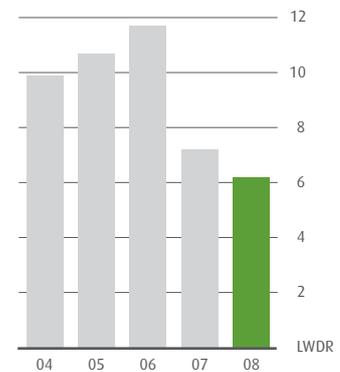
Regular employee surveys are carried out in order to identify potential for improvements in the working environment.

In June 2008 a new outbreak of Legionnaire's Disease was reported in the Sarpsborg area. Five people were infected and two of them died. Traces of legionella bacteria were found at one of Borregaard's installations. Based on the precautionary principle, measures were implemented that included closure of the plant concerned, while studies and an extensive risk assessment were carried out to clarify the situation.

Apart from this, there were no reports of serious emissions or pollution from Orkla's factories in 2008.

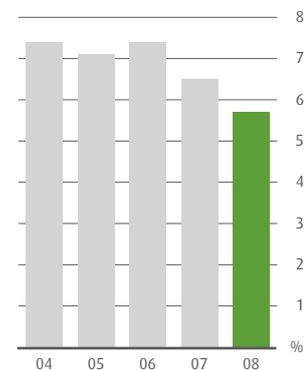
Orkla acknowledges the effect of its activities on the environment and makes

TRENDS IN LWDR<sup>1</sup> AT ORKLA<sup>\*</sup>



<sup>1</sup> Number of injuries leading to absence per million hours worked  
<sup>\*</sup> Historical figures (incl. discontinued operations) for 2004-2007

TRENDS IN SICKNESS ABSENCE FOR ORKLA IN NORWAY<sup>\*</sup>



<sup>\*</sup> Historical figures (incl. discontinued operations) for 2004-2007

## Environment, Health and Safety

efforts to limit the environmental impacts of its operations. All the environmental requirements laid down by authorities and local communities must be complied with. The Group's main environmental impacts are related to the use of energy and resources, waste management, local pollution, greenhouse gas emissions and transport.

Orkla believes it is important to take responsibility for limiting environmental impacts throughout the value chain. Consequently, it carries out life cycle assessments to identify the impacts of various products and production systems on the environment and the climate.

Greenhouse gas emissions from Orkla companies amounted to 2.25 million tonnes of CO<sub>2</sub>-equivalents in 2008, 18 % lower than in 2007. This figure is affected by the fact that, following the exchange agreement with Alcoa, Elkem Aluminium is no longer reported in the financial statements as continuing operations. Emissions of greenhouse gases from Orkla's activities are primarily a consequence of Elkem's production. As a result of continuous focus on process and operational improvements, emissions of CO<sub>2</sub> and other greenhouse gases are approaching a minimum level. Emissions from Sapa's and Borregaard's factories and from Orkla's other operations are mainly linked to the production of thermal energy from fossil fuels.

Competence and know-how are used to improve and develop processes, production and products in order to reduce or limit their impact on the environment. Substantial resources were devoted also in 2008 to increase understanding of the challenges to the climate, and how this affects Orkla, through necessary measures and possibilities. Through its involvement in the

solar energy companies Elkem Solar and REC, Orkla is contributing to the development of alternative energy sources with minimal impact on the climate. Other products, such as aluminium, lignin and Microsilica<sup>®</sup>, can also lead to lower energy consumption and thereby reduced greenhouse gas emissions.

Orkla is dependent on energy and total consumption in 2008 was 11.1 TWh, around 5.8 TWh of which was electricity. Orkla's own hydropower plants produced 3.8 TWh of electricity. All Orkla companies focus continuously on saving and investment projects to reduce energy consumption, and to use renewable energy to the greatest possible extent.

Orkla is targeting to rationalise transport and use packaging materials that can be re-used or recycled. Orkla companies are members of Nordic organisations that collect and recycle packaging.

Orkla's products are based on safe raw materials and are manufactured using accepted methods. Orkla requires its suppliers to meet specific product safety, environmental and ethical production standards. In 2008 there was additional focus on monitoring the Group's suppliers, and a food safety system was developed for approval of and auditing suppliers.

In 2008 several companies made efforts to comply with the requirements laid down in the EU's chemical regulation, REACH (Registration, Evaluation and Authorisation of Chemicals) by ensuring that necessary chemicals are pre-registered with the European Chemicals Agency (ECHA).



# 2008

## THE BUSINESS AREA

The former business areas Orkla Foods and Orkla Brands were amalgamated in 2008. The new business area, Orkla Brands, is divided into the following four units: Orkla Foods Nordic, Orkla Brands Nordic, Orkla Brands International and Orkla Food Ingredients.

ORKLA BRANDS

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# OPTIMAL PACKAGING SOLUTIONS

Many Orkla Brands companies have worked for years to find optimal packaging solutions that provide adequate protection for the product while minimising resource use and environmental impacts. Several factories have carried out a number of energy-efficiency measures and have identified further possibilities for reducing energy consumption or switching to environment-friendlier solutions.

# Orkla Foods Nordic



In 2008 a number of energy-efficiency measures were carried out at Orkla Foods Nordic's factories. By reducing energy consumption and switching to cleaner sources of energy, emissions of CO<sub>2</sub> and SO<sub>2</sub> are also reduced.

Another important area of focus for Orkla Foods Nordic is to further develop its EHS culture and introduce a common system of EHS audits.

## RESULTS AND ACTIVITIES 2008

### Health and safety

The Lost Work Day Rate (LWDR) for Orkla Foods Nordic dropped from 15 in 2007 to 13 in 2008. Nevertheless, this is still too high and the business area will continue its active efforts to prevent injuries.

The situation varies significantly from one Orkla Foods Nordic company to another. The rates for Beauvais and Bakers are higher than average, while they are lower than average for Abba Seafood, Orkla Foods Fenno-Baltic, Procordia Food and Stabburet.

Sadly, despite the emphasis on preventing occupational accidents, one of Latfood's sales representatives was killed in a car accident in Latvia.

The overall sickness absence rate was 5.3 %. This is a decline from 2007, when the sickness absence rate was 6.1 %.

A number of improvement programmes are in progress in the various companies. These include focus on reporting and following up near-misses and hazardous conditions.

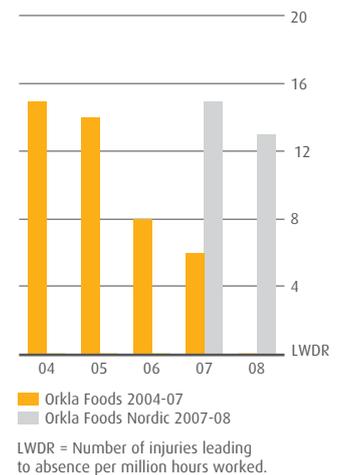
### Energy

Energy consumption at Orkla Foods Nordic totalled 475 GWh in 2008, down from 502 GWh in 2007. This reduction is largely due to slightly lower overall production volumes and changes in the product portfolio. Energy consumption per quantity produced was reduced from 1.00 MWh per tonne in 2007 to 0.97 MWh per tonne in 2008.

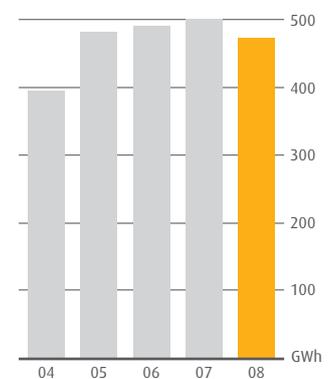
Orkla Foods Nordic works systematically to reduce its energy consumption by implementing continuous improvements in its companies. Examples of energy-efficiency measures implemented at Orkla Foods Nordic factories in 2008:

- Stabburet's factory at Stranda, Norway, has cut its energy consumption by roughly 3.3 GWh per year since 2005. This has primarily been achieved by optimising the ventilation, air compression and cooling systems.
- Procordia Food in Sweden saved around

LOST WORK DAY INJURIES



CONSUMPTION OF ENERGY



The companies that make up Orkla Foods Nordic are Stabburet and Bakers (Norway), Procordia Food and Abba Seafood (Sweden), Beauvais (Denmark), Panda and Felix Abba (Finland), Põltsamaa Felix (Estonia), Spilva (Latvia), and Suslavicius-Felix (Lithuania).

## Orkla Foods Nordic

- 1 GWh of electricity and heat in 2008
- At Abba Seafood's factory in Kungshamn, Sweden, a low-energy lighting system with movement sensors was installed in the raw materials storage facility.
- At Abba Seafood's warehouse in Uddevalla, Sweden, oil consumption was reduced by installing a heat recovery system in the freezers.

### Emissions

Most Orkla Foods Nordic factories have been granted permits by the authorities for emissions and discharges, waste and noise.

Orkla Foods Nordic's emissions of CO<sub>2</sub> from its own production operations are generated by the burning of oil, natural gas and propane. In 2008, emissions were 4,500 tonnes lower than in 2008, as a result of various energy-efficiency measures and lower production volumes. Orkla's climate accounting for 2008 also includes emissions from purchased energy, bringing total CO<sub>2</sub> emissions to 77,000 tonnes. Purchased energy accounts for 30 % of total emissions.

Emissions of SO<sub>2</sub> were reduced to approximately 25 tonnes in 2008 from around 37 tonnes in 2007. This decline is primarily ascribable to the fact that Procordia Food in Kumla, Sweden, switched to using low-sulphur fuel in its production.

### Waste

Efforts to reduce and sort waste were intensified in 2008, and most of the factories have invested in special waste management centres in order to rationalise this process.

The waste produced by Orkla Foods Nordic totalled 67,100 tonnes in 2008. Most of the waste was further utilised as bioenergy (37,000 tonnes) and animal feed (17,100 tonnes). Some 2,000 tonnes were used as fertiliser, and 4,500 tonnes consisted of sorted packaging material that was recycled. 5,000 tonnes were deposited at landfills.

The volume of waste used as animal feed included around 2,000 tonnes of bread, which Bakers, Norway, collected from retailers and delivered to animal feed producers.

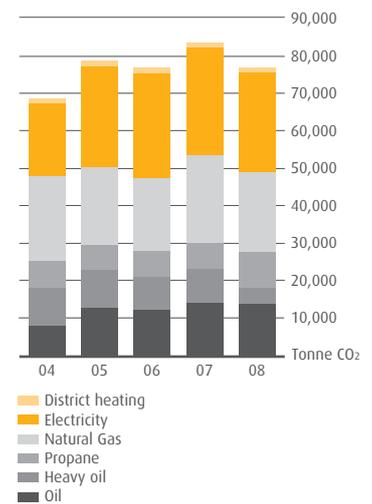
Total waste per tonne of finished product was 136 kg in 2008, a figure that has remained fairly constant in the past few years.

### Water consumption

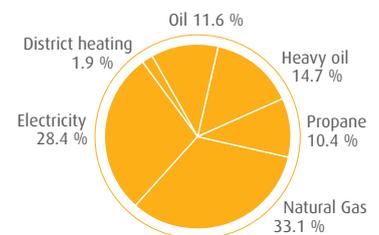
Water consumption at Orkla Foods Nordic totalled 2,913,000 m<sup>3</sup> in 2008, down 338,000 m<sup>3</sup> from 2007. Consumption of water per tonne of finished product averaged 5.9 m<sup>3</sup> in 2008, compared with 6.5 m<sup>3</sup> in 2007.

Several of the factories have made

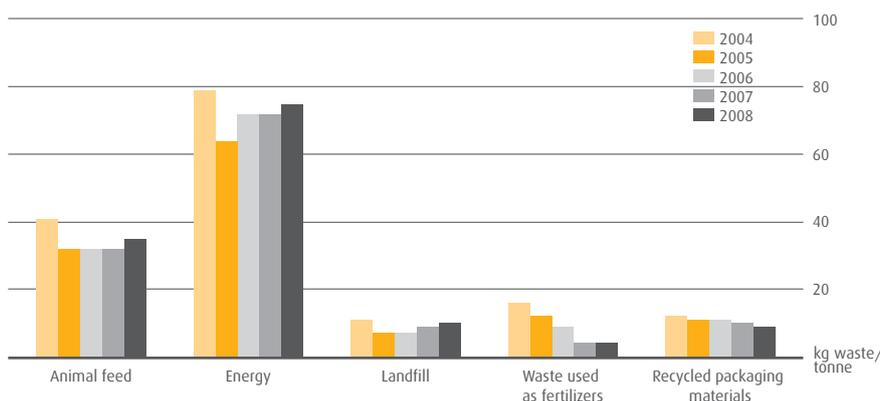
TOTAL CO<sub>2</sub>-EMISSIONS FOR ORKLA FOODS NORDIC 2004-08



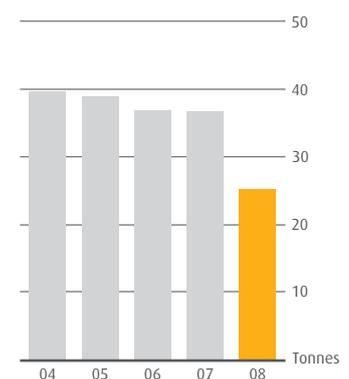
ALLOCATION OF CO<sub>2</sub>-EMISSIONS FOR ORKLA FOODS NORDIC 2008



WASTE PER TONNE OF FINISHED PRODUCT



EMISSIONS TO AIR – SO<sub>2</sub>



## Orkla Foods Nordic

comprehensive efforts to reduce their water consumption, and most factories succeeded in lowering consumption in relation to 2007. One example is Suslavicius-Felix in Lithuania, which cut its overall water consumption from 10,500 m<sup>3</sup> in 2007 to 8,900 m<sup>3</sup> in 2008 by installing an automatic washing system and by recycling wash water. This is equivalent to a reduction from 1.1 m<sup>3</sup> to 1.0 m<sup>3</sup> per tonne of finished product.

### Packaging

An average of 146 kg of packaging material is used per tonne of finished product, but packaging use varies greatly from one type of product to another. Glass accounts for the largest amount in terms of weight (52%), followed by paper (24%), plastic (17%) and metal (8%).

In 2008 Orkla Foods Nordic companies continued their efforts to choose optimal packaging solutions for both existing and new products.

### The local environment

Beauvais' factory in Svinninge, Denmark, has problems with noise levels. The factory is currently working with the authorities to draw up an action plan to reduce noise. Two of Procordia Food's factories in Sweden have also focused attention on noise and have reduced night-time noise.

### Other matters

Procordia Food, Beauvais and Abba Seafood market and sell organic products, such as ketchup, marmalade, pasta, herring and cod roe spread.

## MEASURES AND PLANS

### Health and safety

The Lost Work Day Rate (LWDR) must be reduced. Orkla Foods Nordic will focus on further developing the corporate EHS culture with a view to preventing injuries and reducing sickness absence. A common system of EHS audits will be introduced.

### Energy

At many Orkla Foods Nordic factories,

efforts have been initiated to reduce energy consumption and switch to cleaner sources of energy, thereby lowering emissions of CO<sub>2</sub> and SO<sub>2</sub>. This work will continue in 2009.

Other examples of energy-efficiency measures:

- The 2008-2012 energy programme that has been launched at Råbekken, Rygge, Gimsøy and Brumunddal aims primarily to establish an energy management procedure that includes a system for monitoring energy consumption on a weekly basis. Efforts to increase awareness of energy consumption are expected to reduce consumption by 5–10 %.
- Measures relating to energy efficiency and the choice of energy carriers will be implemented at Stabburet. One such measure concerns the optimisation of operating times for the ventilation system at Gimsøy, which will reduce consumption by 300 MWh per year.
- Procordia Food is planning to optimise the steam boiler at its Eslöv plant, achieving an energy gain of 1500 MWh per year.
- Procordia Food in Eslöv intends to install a heat pump to chill ammonia, and the excess heat will generate an energy gain equivalent to 700 MWh per year.
- Suslavicius-Felix will replace the old electric motors (5.2 kW) with new

electric motors (3 kW) on its main production line.

### Discharges and waste

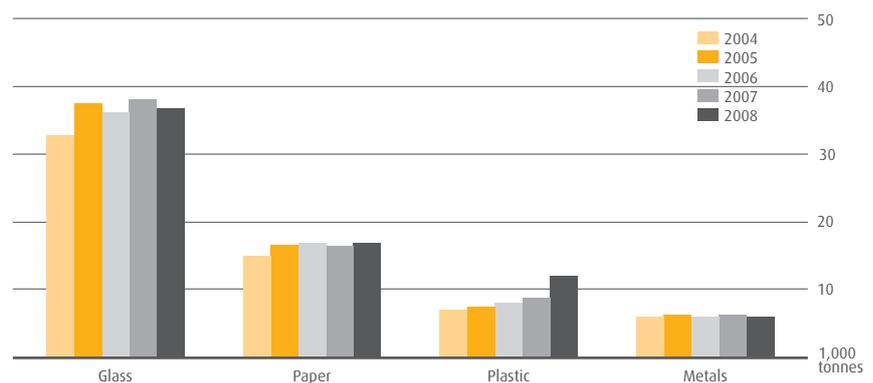
The amounts discharged to water are closely linked to process yield. It is therefore important for both financial and environmental reasons to promote good process management that entails the lowest possible consumption of raw materials.

The amount of production waste will also be further reduced in the years ahead. Several factories have invested in special waste management centres in order to rationalise the process of sorting different types of waste. Efforts to reduce and sort waste and reduce discharges will continue in 2009.

Some examples of measures planned for 2009:

- At the Stabburet factory in Ualand, Norway, equipment will be installed to adjust the pH of waste water. The factory will work closely with local authorities to optimise this process.
- The Stabburet factory in Fredrikstad, Norway, is considering installing new equipment to thaw raw materials, which will probably reduce the need to treat water.
- The Felix Abba factory in Turku, Finland, will introduce measures to reduce the quantity of solid particles in waste water
- Abba Seafood, Sweden, sent part of

CONSUMPTION OF PACKAGING MATERIALS



## Orkla Foods Nordic



its sludge on a trial basis for treatment in a municipal facility in 2008. This has proved to function well and will continue in 2009

- Procordia Food will introduce a system for sorting waste at an earlier stage with a view to increasing the amount of waste that can be recycled.

### Raw materials (including water), chemicals and packaging

Looking at the value chain as a whole, it is the input factors that have the greatest negative impacts on the environment. Several factories are focusing specifically on maximising production yield and minimising production waste, thereby reducing the amount of organic waste and the amount of organic material in waste water.

To reduce the use of packaging, active efforts are made to choose optimal packaging solutions for both existing and new products. The aim is for packaging to provide adequate protection for the product with the lowest possible use of resources and environmental impact. Reducing the amount of packaging per quantity of finished product is a challenge, because it is increasingly common to reduce the amount of product per package for marketing reasons.

### Transport

Orkla Foods Nordic's companies strive to reduce the negative impact of transport by rationalising the transport system. Optimising packaging to ensure that pallets and vehicles are utilised as effectively as possible can make an important contribution. Some companies require the carriers of their finished products to have environmental certification.

### The local environment

Compliance with the maximum noise levels imposed by the authorities poses a challenge for some factories. Since evening and night-time threshold values are lower, this challenge has increased as evening and night-time production has been stepped up. The noise level at Beauvais' factory in Svinninge is too high, and in 2009 the factory will draw up a noise reduction plan in cooperation with the authorities.

### Other matters

In connection with the construction of a new pasta factory in Skovlund, Denmark, Beauvais sought assistance from an energy consultant to find the most environment-friendly solution. This includes regenerating heat and using CO<sub>2</sub> instead of CFCs as a refrigerant.

# Orkla Brands Nordic

New common systems and procedures were established in 2008 to further improve the standard of EHS work and ensure that experience and practices from the best units are transferred to all the companies.

All the factories have carried out safety audits in the past few years, as an important element of efforts to create a good, safe working environment.

## RESULTS AND ACTIVITIES IN 2008

### Health and safety

The overall Lost Work Day Rate (LWDR) for Orkla Brands Nordic was 7.7 in 2008, down from 8.5 the year before. Despite the improved trend in 2008, there are still too many injuries. Accidents, injuries and near-misses are registered in the factories' non-conformance systems. Active use is made of these systems to implement corrective measures.

The management team at Orkla Brands Nordic devoted particular attention to EHS issues in 2008. The systems and practices currently in use were reviewed. Furthermore, new common systems and procedures were put in place to further raise the standard of EHS work, and to ensure that experience and best practices are transferred to all the companies. Among other things, it was decided that EHS audits are to be carried out at least every third year at all factories.

In the past few years, as an important part of the efforts to ensure a good, safe work environment, all the factories in Orkla Brands Nordic have carried out safety audits under the Det Norske Veritas (DNV) International Safety Rating System (ISRS). In 2008, a second audit was carried out in all the snacks factories, and a first ISRS audit was carried out at Axellus Denmark. The second audit conducted in the snacks area showed a significant improvement since the first audit.

Orkla Brands Nordic focuses on sickness absence and close follow-up of persons on sick leave. In the Norwegian companies, this process takes place within the framework of the Inclusive Working

Life Agreement. Sickness absence reporting procedures were quality assured in 2008 to ensure common practice in Orkla Brands Nordic companies in every country.

The overall sickness absence rate in Orkla Brands Nordic was 6.5 %, on a par with the rate in 2007. Thus the goal of a 10 per cent reduction from the previous year was not achieved.

### Energy

Energy consumption in Orkla Brands Nordic totalled 196 GWh in 2008, compared with 183 GWh in 2007. The increase is a result of higher production volume. Consumption per tonne produced is stable at 1.6 MWh, but energy consumption varies significantly from one company to another. Consumption at Lilleborg's detergents factory, for instance, totalled 0.17 MWh/tonne, while consumption was 1.78 MWh/tonne at Göteborgs Kex, 1.86 MWh/tonne at KiMs Norway and 2.08 MWh/tonne at Nidar.

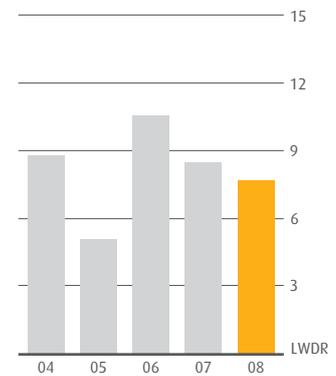
Nidar has systematically worked to reduce its energy consumption for many years. Among other things, the company has invested in heat recovery technology. It has also introduced a system of time control units and movement sensors, improving management of energy use. Since 2004, Nidar has achieved a 16 % reduction in electricity consumption, and was awarded the 2008 Energy Saver Prize by Trondheim Municipality.

Chips plans to increase the use of its own biogas. In autumn 2008, the company replaced the old combustion boiler with a new boiler with five times more effect (1000 kW instead of the former 200 kW). This is expected to generate savings of 5,000 litres of oil per week.

### Emissions

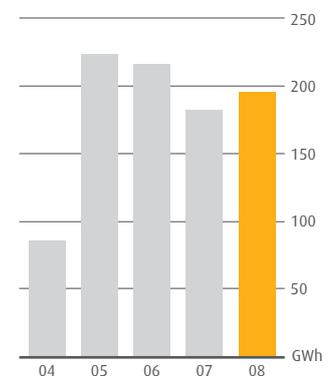
Emissions of CO<sub>2</sub> to air from Orkla

LOST WORK DAY INJURIES



LWDR = Number of injuries leading to absence per million hours worked

CONSUMPTION OF ENERGY



Orkla Brands Nordic comprises the companies Lilleborg, Lilleborg Professional, Axellus, the Chips Group, Göteborgs/Sætre, Nidar and the Pierre Robert Group.

## Orkla Brands Nordic

Brands Nordic's own production totalled 25,700 tonnes, down from 27,800 tonnes in 2007. Orkla's climate accounting for 2008 also includes emissions from purchased energy, bringing total CO<sub>2</sub> emissions to close to 35,000 tonnes. Purchased energy accounts for 26 % of emissions. Emissions of SO<sub>2</sub> are generated by the burning of oil (light and heavy oil), and totalled 5,100 kg in 2008. This is a reduction from 6,500 kg in 2007, and is ascribable to the switch from heavy oil to light oil with a lower sulphur content.

The snacks companies and Lilleborg, which measure discharges of organic material from processing, reported higher emissions in 2008. Chemical oxygen demand (COD) rose by 13 %, while biological oxygen demand (BOD) increased by around 16 % as a result of higher production volumes, but the situation varies from one factory to another.

Lilleborg is engaged in long-term efforts to reduce the amount of organic material in the processing water discharged into the public sewage system from its factory in Ski, Norway. The factory has a licence for 3.5 tonnes of COD per week, and discharged 1.7 tonnes per week in 2008. This is about the same level as in 2007, which was the factory's lowest level ever. This result was achieved despite an increase in product varieties in 2008 that entailed more use of wash water. Re-use of wash water and focus on production planning and change-over routines are important factors for ensuring that discharges of wash water and COD remain well within the licence limits.

KiMs' factory at Skreia, Norway, achieved a substantial improvement in discharges of COD (15 %), BOD (14 %) and solid particles (18%) after investing in an oil separation system for its water treatment plant. There was also strong focus on preventing any food oils from passing through the treatment plant.

OLW in Sweden has begun to use an anti-foaming enzyme that has proved effective in reducing BOD discharges.

At KiMs Denmark, on the other hand, COD

discharges increased by 67 % and BOD discharges rose by 60 % due to a defect in the factory's sludge pool. The company plans to establish new procedures for the sludge pool to prevent the occurrence of further excess discharges. Chips in Finland also reported a rise in COD (20 %) and BOD (15 %) discharges, which is entirely ascribable to increased production.

In 2008 Axellus Norway carried out the first stage of a project to convert its sewage plant to achieve more effective separation of fat from waste water. The results cannot be measured until the next stage of the project has been completed. Axellus Denmark has initiated a project aimed at changing the mineral granulation process to reduce the risk of minerals in waste water.

There were no serious non-conformances with environmental licences or permits in 2008.

### Waste

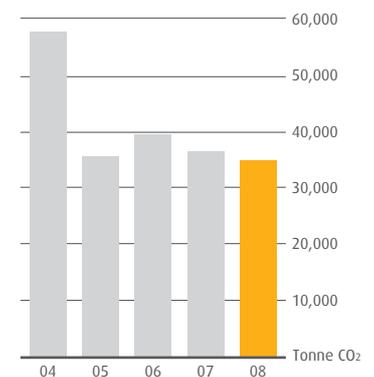
The Orkla Brands Nordic factories generated a total of 19,900 tonnes of waste in 2008, a reduction of over 20 % from the previous year. Most of it was organic waste that is used for animal feed, fertiliser and bioenergy. Potato peelings from Chips account for the largest volume, but these factories sort waste into several different fractions, and the recycling rate is high. For instance, KiMs Norway achieved a recycling rate of 97 %.

Göteborgs Kex and Nidar face the greatest challenge in terms of waste, and the factories work systematically to boost production yield and reduce waste. In 2008, Nidar managed to cut the percentage of waste used for animal feed by as much as 32 %. A total of 20 kg of waste per tonne produced was re-used in animal feed in 2008, compared with 30 kg per tonne produced in 2007. This is the result of activities aimed at increasing the employees' awareness of these issues. Nidar also installed a new waste management plant which facilitates and improves the sorting process.

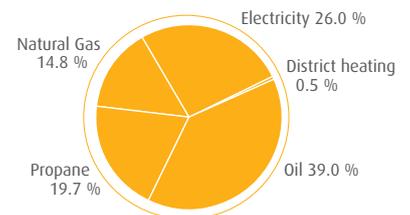
### Raw materials (including water)

Orkla Brands Nordic emphasises the

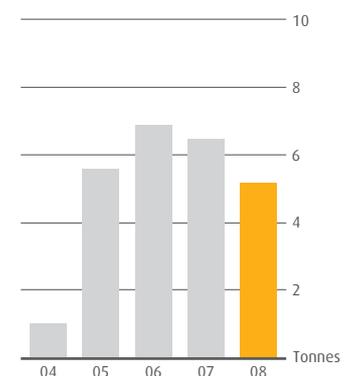
TOTAL CO<sub>2</sub>-EMISSIONS FOR ORKLA BRANDS NORDIC 2004-08



ALLOCATION OF CO<sub>2</sub>-EMISSIONS FOR ORKLA BRANDS NORDIC 2008



EMISSIONS TO AIR – SO<sub>2</sub>



## Orkla Brands Nordic



importance of utilising raw materials as well as possible, and focuses on choosing the raw materials that are best in terms of quality, the environment and health. Several of the companies have drawn up specific guidelines regarding environmental requirements.

Water consumption at Orkla Brands Nordic totalled 594,000 m<sup>3</sup> in 2008, which is a decline of 20,000 m<sup>3</sup> from 2007. Average consumption per tonne produced was 4.73 m<sup>3</sup>, equivalent to a reduction of around 10 %. Almost all of the factories succeeded in cutting consumption, as a result of the business area having defined water consumption as one of its environmental goals.

The companies in Orkla Brands Nordic seek to optimise packaging at every stage of the value chain. They are all members of “Emballasjedugnaden NOK” in Norway, a cooperative project in which grocery suppliers, packaging producers and retailers have joined forces to motivate the players in the packaging chain to introduce their own control procedures to ensure optimal use of packaging.

Lilleborg introduced refill bags for liquid laundry detergents in 2008. This is equivalent to an 80 % reduction in raw material use. If 50 % of consumers choose refills instead of bottles, material use will be reduced by just under 60 tonnes of plastic per year. In 2008, the company

launched the Blenda ECO AloeVera Total laundry detergent concentrate. The environmental benefit is a 33 % reduction in packaging per dose which, as well as reducing transport, will reduce the use of plastic by 11 tonnes per year.

Lilleborg puts strong emphasis on reducing the use of chemicals, for instance by developing increasingly concentrated products. The company also makes active efforts to comply with the official requirement to apply the substitution principle, and in 2008 replaced several raw materials with alternatives with healthier, environment-friendlier properties.

Lilleborg offers the market products bearing the official environmental Swan label in all categories of detergent and other cleaning products, as well as products recommended by the Norwegian Asthma and Allergy Association (NAAF) in key categories. Lilleborg Professional now offers a range of 50 Swan-labelled products. Around 40 % of Lilleborg products for the grocery retail sector have Swan certification. The percentage of NAAF-recommended products also remained stable at 11 %, the same level as in 2007.

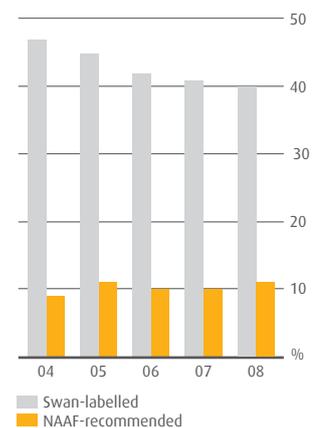
### MEASURES AND PLANS

#### Health and safety

Greater attention will be devoted to EHS issues in 2009 by management teams and at Board level, and Orkla Brands Nordic has decided to initiate a number of measures to ensure focus, quality and a positive trend in this field. Systematic EHS improvement activities will be mandatory in factories, warehouses and sales offices. This will include the preparation of EHS plans containing clearly defined targets, responsibility descriptions, surveys, risk assessments, training and systematic documentation.

Efforts to reduce injuries will have high priority in 2009. The injuries that occur at factories are mainly pinch injuries, primarily involving fingers that are caught in movable machine parts, slip and fall injuries and accidents related to forklift trucks. Averting these types

SWAN-LABELLED AND NAAF-RECOMMENDED DETERGENTS



## Orkla Brands Nordic



of injury will be a priority focus in preventive safety work.

An audit will be carried out at Axellus in 2009 as a follow-up to the initial ISRS audit that was carried out in 2008.

Orkla Brands Nordic aims to reduce sickness absence in 2009, and all companies must set targets and draw up plans to achieve this objective. All management staff with responsibility for personnel will receive training in procedures for following up persons on sick leave.

### Energy

Efforts will be made to cut energy consumption for both financial and environmental reasons. Several of the factories have planned projects aimed at further economising on energy, some of which have been initiated. Axellus in Denmark plans to invest in two new steam generators. Both Axellus Norway and Chips Finland aim to make better use of the biofuel/biogas they themselves produce. KiMs in Denmark will promote energy saving by reducing excess gases from its boiler, and by changing procedures and optimising temperature levels.

### Emissions

OLW plans to switch from oil to propane, thereby reducing emissions of CO<sub>2</sub> by 1,000 tonnes per year and SO<sub>2</sub> by 2,500 kg per year.

In 2009 KiMs Skreia will expand the oil separation system in its water treatment plant. KiMs Denmark plans to establish new sludge pool procedures.

Periodic variations in discharges of fat and odours in waste water, as well as diffuse emissions, pose the greatest challenge for Axellus Norway. There will be more focus on mitigating this problem in connection with new housing development around the factory site. Work on converting the water treatment plant, which began in 2008, will continue in 2009 to achieve more effective separation of fat from waste water.

Axellus Denmark has established a working group to identify the processes that generate the most dust in order to reduce dust and mineral deposits in waste water.

### Waste

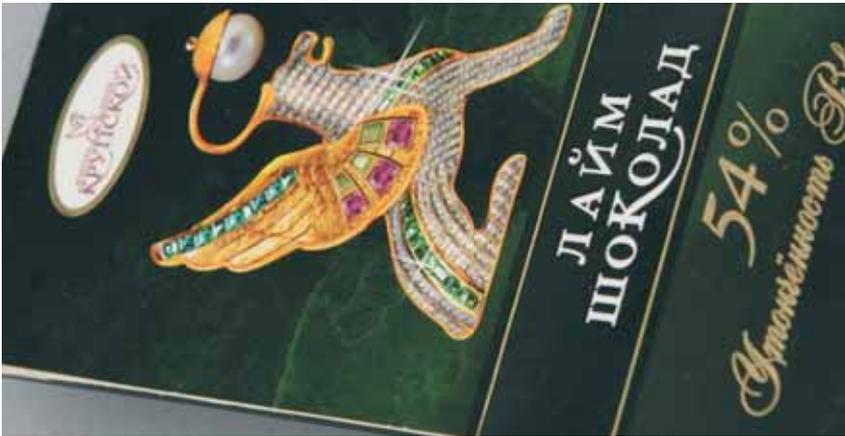
Nidar and Göteborgs Kex will continue their efforts to promote sound attitudes and improve procedures to increase production yield and reduce waste. The snacks business is working on increasing its recycling rate. KiMs Norway will also consider alternative types of packaging in order to reduce packaging waste, and will consider interim storage of used food oil so as to explore the possibilities of alternative use.

### Raw materials (including water consumption) and packaging

All the Orkla Brands Nordic companies are continuing their efforts to reduce water consumption. Packaging optimisation will remain a key focus in 2009, as will Lilleborg's efforts to substitute harmful chemicals with less harmful alternatives.

# Orkla Brands International

Orkla Brands International consists of SladCo and Krupskaya (Russia), Felix Austria (Austria) and MTR Foods (India).



The efforts to reduce sickness absence at Orkla Brands International have produced positive results. Attention has been focused on monotonous work operations that are physically demanding.

In 2008 Orkla Brands International also intensified its efforts to reduce and sort waste, and several factories have invested in special waste management centres to rationalise this process.

## RESULTS AND ACTIVITIES IN 2008

### Health and safety

The companies in Orkla Brands International focus continuously on improving the working environment at their factories by carrying out risk assessments, monitoring and auditing management systems, setting targets and planning action, providing safety training and conducting safety interviews, and carrying out regular safety inspections and audits.

The LWDR for Orkla Brands International rose from 2.0 in 2007 to 4.0 in 2008, as a result of the inclusion of MTR Foods in India in the business area's statistics and a somewhat larger number of injuries in Russia and Austria.

No serious accidents were recorded in Orkla Brands International companies in 2008.

The sickness absence rate in Orkla Brands International was reduced from 3.4 %

in 2007 to 2.7 % in 2008. Continuous efforts to achieve reductions in sickness absence have brought positive results.

Several companies, such as MTR Foods in Bangalore (India), Krupskaya in St. Petersburg and SladCo's factory in Ulyanovsk (Russia), have taken steps to reduce dust and noise levels, as well as improving temperature control in their factories.

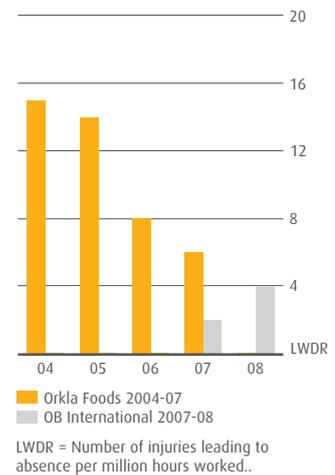
### Energy

Total energy consumption in Orkla Brands International rose sharply from 2004 to 2008 as a result of the acquisitions of SladCo, Krupskaya and MTR Foods. A revision of the method for calculating SladCo's energy consumption in 2008 also increased reported energy consumption by around 30 GWh. A variety of energy-efficiency measures were carried out at several factories, thereby cutting energy consumption.

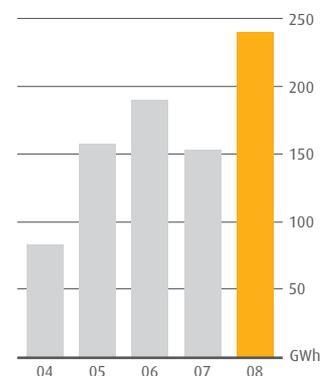
Most of the energy consumed was generated from natural gas. SladCo's factory in Ekaterinburg, Russia, also used 33 GWh of district heating in its production processes.

Orkla Brands International's consumption of energy per quantity of finished product remained fairly constant (0.85

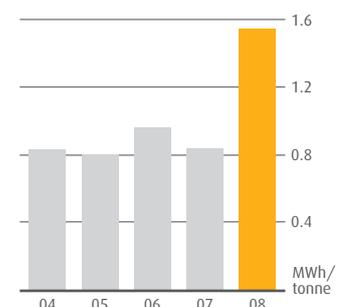
### LOST WORK DAY INJURIES



### CONSUMPTION OF ENERGY <sup>1)2)3)4)</sup>



### ENERGY CONSUMPTION PER TONNE FINISHED PRODUCT <sup>1)2)3)4)</sup>



<sup>1)</sup> SladCo is included from 2005. New method for calculating energy from 2008.

<sup>2)</sup> Krupskaya is included from 2006. District heating included from 2008.

<sup>3)</sup> MTR is included from 2007. Superfish was sold in 2007.

<sup>4)</sup> Guseppe and Kotlin not included in 2008

## Orkla Brands International

MWh) in the period 2004-2007. In 2008 recorded consumption rose to 1.55 MWh per tonne of finished product, primarily due to changes in the methods for calculating energy consumption at SladCo.

### Emissions

The authorities require most of the Orkla Brands International factories to have licences for emissions to water and air, waste and noise. There were no serious non-conformances with environmental licences or permits in 2008.

Most of Orkla Brands International's CO<sub>2</sub> emissions come from the use of natural gas and some oil. Changes in the methods for calculating energy consumption have resulted in higher emissions figures for SladCo in Orkla's climate accounting for 2008. CO<sub>2</sub> emissions from Orkla Brands International's own production operations totalled 36,500 tonnes in 2008, compared with 42,000 tonnes in 2007. The climate accounts also include emissions from purchased energy, which brings total CO<sub>2</sub> emissions to 67,000 tonnes. Purchased energy accounts for 50 % of emissions.

Emissions of SO<sub>2</sub> generated by Orkla Brands International are very low. The emissions come from the production of

heat, which is based on use of fossil fuels, primarily natural gas and some oil, with a low sulphur content.

In 2007 and 2008, several factories installed new equipment that reduces the quantity of fat in the processing water discharged to the municipal sewage system.

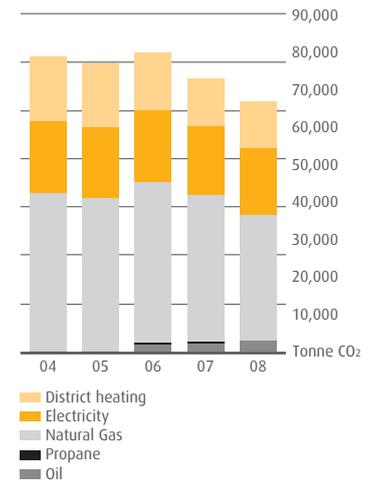
### Waste

Efforts to reduce and sort waste were intensified in 2008, and several factories have invested in special waste management centres in order to rationalise this process. The authorities in several countries, such as Russia, require companies to have special permits for waste management, which must be renewed regularly.

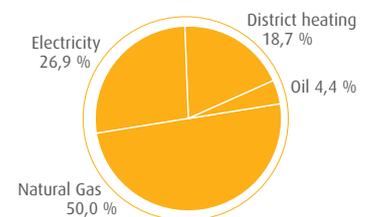
The factories in Orkla Brands International generated a total of 5,000 tonnes of waste in 2008, which is equivalent to 32 kg per tonne of finished product. All the factories ensure that used packaging is collected and sorted before being recycled. In 2008, a total of 1,000 tonnes of packaging waste was collected.

Most of the organic waste is used as fertiliser (700 tonnes), energy produc-

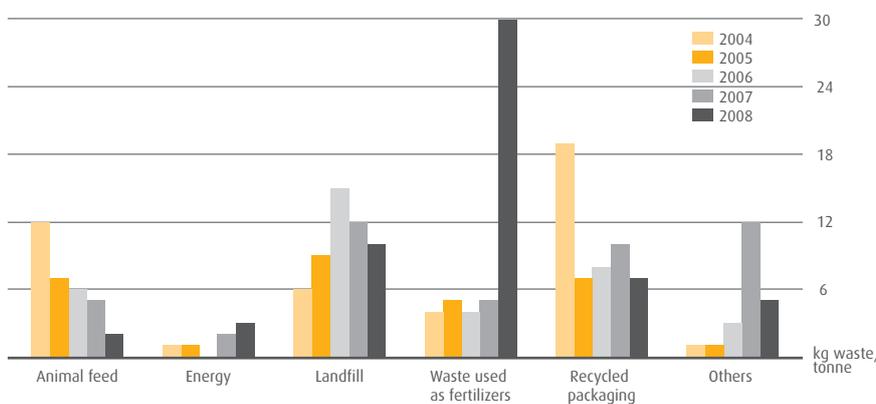
TOTAL CO<sub>2</sub>-EMISSIONS FOR ORKLA BRANDS INTERNATIONAL 2004-08



ALLOCATION OF CO<sub>2</sub>-EMISSIONS FOR ORKLA BRANDS INTERNATIONAL 2008



WASTE PER TONNE OF FINISHED PRODUCT <sup>1)2)3)4)</sup>



<sup>1)</sup> SladCo is included from 2005.

<sup>2)</sup> Krupskaya is included from 2006.

<sup>3)</sup> Superfish was sold in 2007.

<sup>4)</sup> Guseppe and Kotlin not included in 2008, MTR is included from 2007.

## Orkla Brands International

tion (480 tonnes) and animal feed (340 tonnes). Around 1,500 tonnes of residual waste was sent to landfills. At MTR Foods' factory, biogas is produced from the organic waste. The biogas is used to produce heat, thereby reducing consumption of oil and propane.

### Raw materials (including water consumption) and packaging

Orkla Brands International's water consumption totalled 1,740,000 m<sup>3</sup> in 2007, which is a reduction of 100,000 m<sup>3</sup> compared with 2007. This decline is ascribable to the sale of Superfish and changes in the product mix as a result of restructuring. Average consumption per tonne of finished product was 11 m<sup>3</sup>.

The companies in Orkla Brands International strive to find optimal packaging solutions, and therefore use a variety of materials in their product packaging. An average of 165 kg of packaging material is used per tonne of finished product, but the amounts vary greatly from one type of product to another. Paper (including cardboard and corrugated cardboard), which accounts for the largest quantities of material, increased by roughly 20 % in 2008. On

the other hand, the amount of glass used fell sharply in 2008 due to lower production of products packaged in glass. This is chiefly due to the sale of Superfish. The use of metal packaging has remained at about the same level for the past three years, while slightly less plastic is used.

### The local environment

Several of the factories in Orkla Brands International are located in or near residential areas. A variety of measures have been implemented to reduce dust, odours and noise in order to prevent adverse impacts on the local environment.

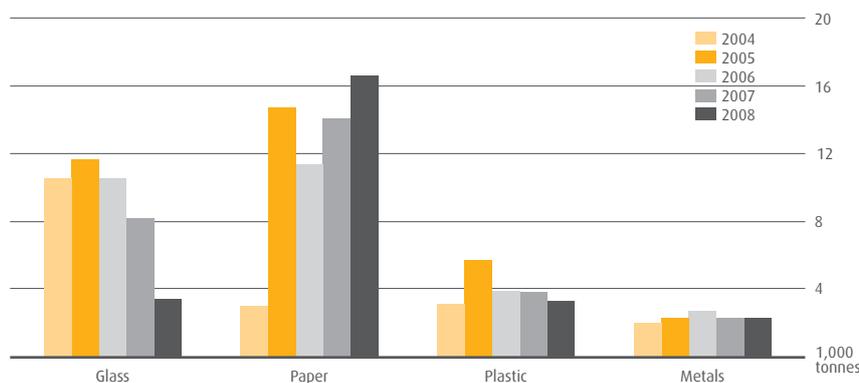
## MEASURES AND PLANS

### Health and safety

Orkla Brands International will continue to intensify its EHS work by carrying out a wide range of measures, analyses and drills.

Attention is focused on monotonous work operations that are physically demanding. Several factories plan to invest in machinery and equipment that will help to reduce heavy, repetitive work that can lead to muscular-skeletal disorders.

CONSUMPTION OF PACKAGING MATERIALS <sup>1)2)3)4)</sup>



<sup>1)</sup> SladCo is included from 2005.

<sup>2)</sup> Krupskaya is included from 2006.

<sup>3)</sup> MTR is included from 2007. Superfish was sold in 2007.

<sup>4)</sup> Guseppe and Kotlin not included in 2008

## Orkla Brands International

Large volumes of ammonia are used as a refrigerant in refrigeration and freezer plants at the factories in Ulyanovsk (Russia) and Bangalore (India). In the event of an accident, ammonia gas could leak out and cause injuries. The facilities are therefore designed to minimise the risk of this kind of accident. Regular emergency drills are held at these factories to help them stay focused on safety when handling ammonia.

### Energy

Energy consumption must be further reduced for both financial and environmental reasons. Energy prices continue to rise, while at the same time many production processes have become more energy-intensive.

There is focus on reducing energy consumption by making continuous improvements. Responsibility for identifying and carrying out improvements is assigned to the local level, but these efforts are supported by a dedicated team at Orkla Brands.

### Emissions and waste

The amount of waste generated in production must be further reduced in the years ahead. Efforts to reduce and sort waste will continue, and more factories intend to invest in special waste management centres in order to rationalise this process.

The amount of waste and discharges to water are closely linked to production yield. It is important for both financial and environmental reasons to promote good process management that entails the lowest possible consumption of raw materials.

### Raw materials (including water) and packaging

At every stage of the value chain, it is the production of input materials, especially biological raw materials, that has the greatest negative impact on the environment. Orkla Brands International focuses on maximising the yield from raw materials and minimising wastage in production processes.

The factories continue their efforts to reduce water consumption and a variety of measures are planned, including recirculating water in different cooling systems and in cooling towers.

Work on developing optimal packaging solutions is being intensified. The aim is for packaging to provide adequate protection for the product based on the least possible use of resources and environmental impact. However, reducing the amount of packaging per quantity of finished product is a challenge, because it is increasingly common to reduce the amount of product per package for marketing reasons.

### The local environment

Several factories located in or near residential areas find it a challenge to comply with the stipulated limits for odours, dust and noise. Since evening and night-time threshold values are lower, this challenge has increased as evening and night-time production has been stepped up. Active efforts are being made to measure dust and noise and to implement other measures to minimise adverse impacts on the local community. Among other things, there are plans to reduce emissions of unpleasant odours to the local environment and night-time noise from the Krupskaya factory.

### Other matters

The Bangalore authorities are planning to build a common municipal treatment plant in future, which may entail a need to invest in a pipeline for wastewater from the MTR Foods factory.

Several of the factories in Orkla Brands International still use chlorofluorocarbons (CFCs) as coolants (totalling around 2,000 kg), but they are planning to switch to less polluting coolants.

# Orkla Food Ingredients



Total emissions of CO<sub>2</sub> were reduced slightly in 2008, as were emissions of CO<sub>2</sub> per tonne of finished product. This is due to more efficient processes and a change in the energy mix.

Another key area of focus is the safety work carried out at the factories, all of which have reduced the incidence of injuries in the past few years.

## RESULTS AND ACTIVITIES IN 2008

### Health and safety

The Lost Work Day Rate (LWDR – number of injuries leading to absence per million hours worked) for Orkla Food Ingredients fell from 9 in 2007 to 7 in 2008. This is a result of the safety work carried out at the factories, all of which have reduced their injury rate in the past few years. However, injury rates still differ significantly from one company to another.

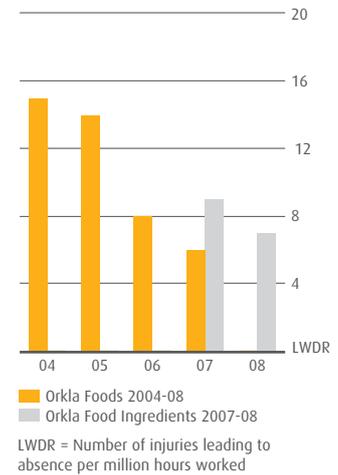
No serious accidents were registered in Orkla Food Ingredients' facilities in 2008. The sickness absence rate for Orkla Food Ingredients was 3,5 % in 2008, down

from 4,1 % in 2007. This decline indicates that the companies' continuous efforts to reduce sickness absence have brought positive results.

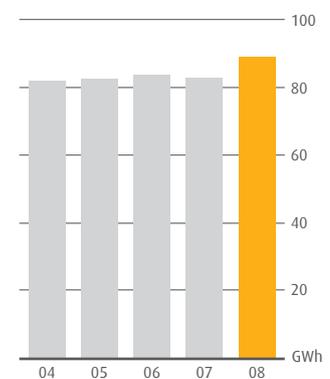
### Energy

Energy consumption at Orkla Food Ingredients totalled around 89 GWh. This is an increase compared to the period 2004 – 2007, when consumption was around 83 GWh per year. However, energy consumption per tonne of finished product is at the same level as in 2007, at approximately 0.53 MWh, which is a decline from around 0.60 MWh in 2004. This improvement is the result of several different energy-efficiency measures, but also of changes in the product range due to restructuring. A total of 40 % of energy production was based on oil and natural gas, while electricity and district heating accounted for 60 % of energy supplies.

LOST WORK DAY INJURIES



CONSUMPTION OF ENERGY



Orkla Food Ingredients consists of Idun Industri, the Credin Group, Odense, KåKå, Jästbolaget, the Dragsbæk Group and Orkla Foods Romania.

## Orkla Food Ingredients

### Emissions

Only half of the Orkla Food Ingredients factories are required to have licences or more extensive permits for emissions, waste and noise. This is because the other factories are not considered to cause significant environmental impacts.

At Belusa in Slovakia, processing water was discharged to a stream due to a leak from a sewage pipe. The authorities took samples that showed a high fat content, and Belusa was required to pay a small fine.

Orkla Food Ingredients' emissions of CO<sub>2</sub> are generated by the burning of oil and natural gas. Emissions in 2008 totalled 8,400 tonnes, which is 200 tonnes lower than in 2007. This reduction is ascribable to restructuring and to the fact that the companies have succeeded in cutting their overall energy consumption by implementing a range of energy-saving measures. Orkla's climate accounts for 2008 also include emissions from purchased energy, which brings total CO<sub>2</sub> emissions close to 15,000 tonnes. Purchased energy accounts for 43 % of emissions.

Emissions of CO<sub>2</sub> per tonne of finished product were reduced by 3 % per year, from 62 kg in 2004 to 50 kg in 2008. This is the result of more efficient processes, but also of a change in the energy mix towards increased use of natural gas and less use of oil. Emissions of SO<sub>2</sub> from heat production

based on oil have increased steadily in the period from 2004 to 2006 and in 2008. This is primarily due to higher production volumes and greater use of heavy oil. However, SO<sub>2</sub> emissions remained fairly constant at 0.1 kg per tonne of finished product throughout the period.

### Waste

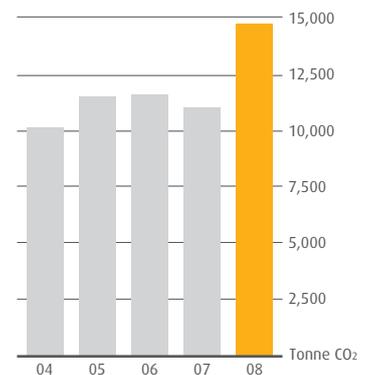
The Orkla Food Ingredients factories continued their systematic efforts to reduce waste and increase source separation. The factories generated a total of about 11,000 tonnes of waste, corresponding to about 64 kg per tonne of finished product.

A total of 72 % of the waste is used as fertiliser on cultivated fields. Most of this waste comes from process water containing nitrogen and potassium from Jästbölaget in Sweden. 11 % of the waste is used in animal feed. Residual waste deposited at landfills amounted to 110 tonnes, equivalent to 1 % of total waste.

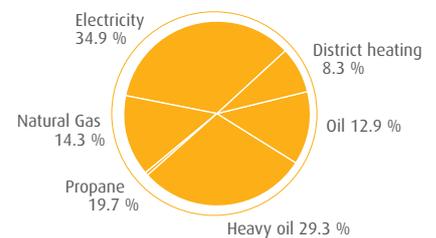
At Credin in Denmark, waste used in animal feed was reduced by 30 % following the introduction of bar codes at the factory and increased production efficiency.

Most of the factories collect and sort used packaging, which is sent for recycling. In 2008, a total of 277 tonnes of packaging waste was collected.

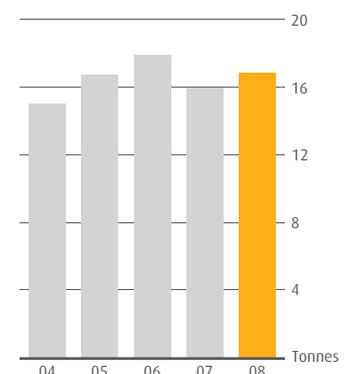
TOTAL CO<sub>2</sub>-EMISSIONS FOR ORKLA FOOD INGREDIENTS 2004-08



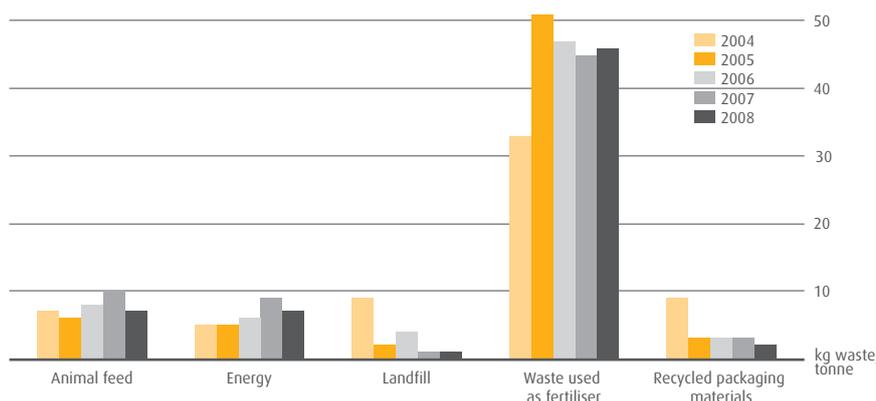
ALLOCATION OF CO<sub>2</sub>-EMISSIONS FOR ORKLA FOOD INGREDIENTS 2008



EMISSIONS TO AIR – SO<sub>2</sub>



WASTE PER TONNE OF FINISHED PRODUCT



## Orkla Food Ingredients

### Raw materials (including water) and packaging

Water consumption at Orkla Food Ingredients remained largely unchanged (approx. 715,000 m<sup>3</sup> per year) from 2005 to 2007, but fell to 613,000 m<sup>3</sup> in 2008. Average consumption per tonne produced was 3.6 m<sup>3</sup>, down from around 4.5 m<sup>3</sup> in 2007. Consumption within Orkla Food Ingredients varies considerably. For example, yeast production requires a great deal of water per quantity produced, while the production of dry ingredients calls for less water.

Jästbolaget carried out water-efficiency projects in 2008, which reduced water consumption by 8 %.

### The local environment

From time to time, production at Jästbolaget in Sweden has caused unpleasant, but innocuous odours. The odours have resulted in a few complaints from the local community. They have been followed up, and the factory work continuously to reduce these problems.

## MEASURES AND PLANS

### Health and safety

Orkla Food Ingredients will continue to improve its EHS work by carrying out a variety of measures, analyses and drills.

Injury prevention efforts will continue in 2009, in addition to a focus on reducing long-term sickness absence.

### Energy

Orkla Food Ingredients works continuously to reduce energy consumption. Responsibility for identifying and carrying out improvements is assigned to the local level, with the support of a dedicated central team.

The following initiatives are planned for 2009:

- Jästbolaget plans to change its distribution logistics, thereby economising on diesel oil.
- Credin Danmark plans to install direct heating and temperature controls in its factory and warehouse to be able to lower the temperature on weekends and during holiday periods when the factory is closed.
- Idun Rakkestad in Norway is exploring the possibility of phasing out oil and replacing a local oil burner with hot water from a local waste incineration plant.

### Emissions and waste

Efforts to reduce and sort waste will be maintained, and several factories have invested in special waste centres in order to rationalise this process.

The amounts of waste as well as discharges to water are closely linked to production yield. It is therefore extremely important for both financial and environmental reasons to promote good process management that entails the lowest possible consumption of raw materials. Jästbolaget will improve production process controls in order to reduce waste.

Jästbolaget will apply for a new discharge licence in 2009/10.

### Raw materials (including water consumption) and packaging

Input materials, especially biological raw materials, have the greatest negative impact on the environment at every stage of the value chain. Production processes focus on maximising the yield from raw materials while minimising wastage.

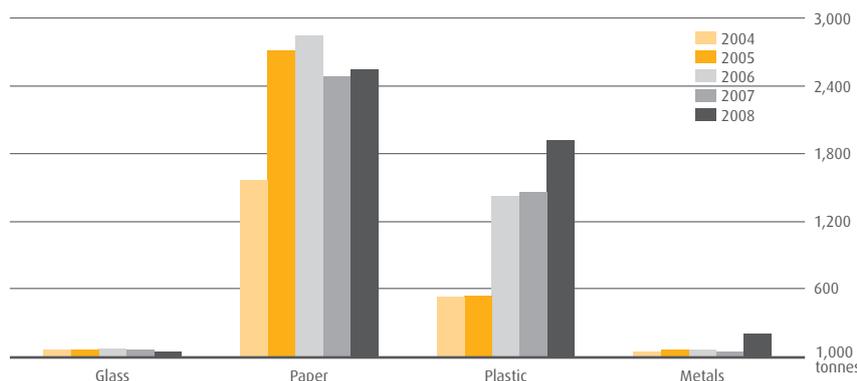
There is also focus on reducing water consumption at all the plants that use a substantial amount of water. Dragsbæk in Denmark has planned measures to recycle process water, which will reduce the discharge of waste water to the sewage system by 1,500 m<sup>3</sup> in 2009.

Efforts to develop optimal packaging solutions for all packaged products will be intensified. The aim is for packaging to provide adequate protection for the product with the least possible use of resources and environmental impact. However, reducing the amount of packaging per quantity of finished product poses a challenge, because it is increasingly common to reduce the amount of product per package for marketing reasons.

### The local environment

Several factories located in or near residential areas find it a challenge to comply with the stipulated limits for odours, dust and noise. Since evening and night-time threshold values are lower (40-45 dB), this challenge has increased as evening and night-time production has been stepped up. Active efforts are being made to measure dust and noise and to implement other measures to minimise adverse impacts on the local community.

CONSUMPTION OF PACKAGING MATERIALS





# 2008

## THE BUSINESS AREA

Elkem is one of the world leaders in the environment-friendly manufacture of metals and materials. Its main products are energy, silicon, special ferrosilicon alloys for the foundry industry, carbon and microsilica. Elkem also invests heavily in the solar industry. The company has production facilities in Europe, North and South America, Africa and Asia, and an extensive network of sales offices in its main markets.

Borregaard has one of the world's most advanced biorefineries and is a leading manufacturer of chemicals, materials and fuel based on renewable biomass. The company also holds attractive positions in the ingredients, fine chemicals and energy markets, with production facilities and sales offices in 20 countries.

ORKLA MATERIALS

# ENVIRONMENT- AND ENERGY-EFFICIENT PRODUCTS

**Silicon and Microsilica® are examples of Elkem products that contribute positively to the state of the environment. Elkem Solar's production plant for solar-grade silicon started up at the end of 2008.**

**Most of Borregaard's wood-based products, such as speciality cellulose, lignin products, vanillin, yeast products and bio-ethanol, are environmentally sustainable and offer alternatives to products based on non-renewable materials. For instance, Borregaard's bioethanol generates very low CO<sub>2</sub> emissions compared with petrochemical and various other bio-based alternatives.**

# Elkem

No single activity at Elkem has generated greater environmental improvements than the long-term efforts to increase productivity.

Due to strong internal focus, the company's health and safety performance has improved very substantially over time.

## RESULTS AND ACTIVITIES IN 2008

### Health and safety

Strong focus on health and safety over time has brought excellent results in this business area. From 2005 to 2008, the Lost Work Day Rate (LWDR) declined from 3.5 to 1.4 (excluding Elkem Aluminium, the LWDR for Elkem in 2008 was 1.8), while the Total Recordable Rate (TRR) has fallen from 34.4 to 7.2 (excluding Elkem Aluminium, the TRR was 6.8).

No accidents resulting in death or serious, permanent injury to employees or external personnel were recorded in 2008. Despite a strong focus on safe behaviour and job performance and the steady decrease in the number of serious injuries, there were nevertheless several incidents that could have had serious outcomes. Most of the injuries reported were cuts and pinch injuries to arms, hands and fingers, in which the most serious incident resulted in a finger being amputated. Focus on job performance and the introduction of protection have gradually reduced the number of burns and eye injuries.

Elkem introduced a common EHS management system (FOKUS) in 2007, which focuses on management involvement, critical work operations and training in important EHS tools. The implementation of this system throughout the organisation continued in 2008.

One EHS success story is Elkem Carbo-derivados in Brazil which, as a result of targeted, long-term efforts, can claim a record of over 11 years with zero injuries leading to absence. The construction of the Elkem Solar plant in Norway has also entailed around 2.6 million working

hours without injuries leading to absence (as of 31 December 2008), thanks to the strong EHS focus in the project. Elkem held safety courses for around 5,500 persons from 45 different countries during the construction period.

Through continuous focus on prevention, management involvement and personal follow-up of individuals, sickness absence at Elkem has been reduced from 7.2 % in 2003 to 3.1 % in 2008.

At the Norwegian companies, efforts to reduce sickness absence, which are based on the framework of Inclusive Working Life Agreement, have shown positive results. Sickness absence declined from 6 % in 2006 to 4.9 % in both 2007 and 2008. As soon as an employee goes out on sick leave, the focus is on providing assistance, assessing his or her remaining capacity for work and helping to get the person back to work as quickly as possible. Health check-ups are carried out regularly and dust, noise and heat levels are measured in the work environment.

In 2008, results from a multi-year project showed that there is a possible link between the dust to which smelting plant workers are exposed and the development of chronic obstructive lung disease (COLD). The project was initiated by Elkem, but was carried out as a joint endeavour with participants from all smelting plants in Norway. Steps have been taken to reduce dust levels, and action plans have been drawn up for further improvement measures.

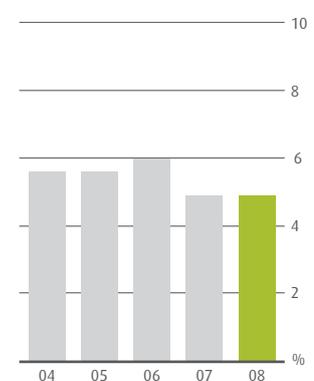
### Energy

The company's consumption of electricity (excluding Elkem Aluminium) totalled 4.0 TWh in 2008, while consumption in 2007 (including Elkem Aluminium) came to 8.7 TWh. Elkem's hydropower plants in Norway and Canada generated 3.4 TWh of electricity. At the Elkem Thamshavn and Elkem Bjølvfossen smelting plants, 175 GWh of recycled electrical energy was generated from hot waste gases.

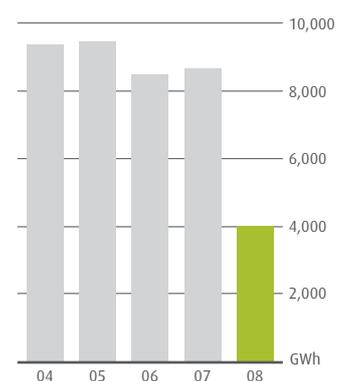
LOST WORK DAY AND TOTAL RECORDABLE INJURIES



SICKNESS ABSENCE IN ELKEM'S NORWEGIAN OPERATIONS



CONSUMPTION OF ENERGY\*



\*Electrical energy

## Elkem

In addition, several of Elkem's plants utilised waste heat in the form of hot water or steam for heating or in neighbouring production facilities.

Elkem has invested heavily in renewable energy sources in Norway. After a large-scale upgrading, the Elkem Saudefaldene power plant started up in autumn 2008. Development of the Saudavassdraget plant, at a total cost of NOK 1.9 billion, has boosted production by 600 GWh, equivalent to the energy consumption of 30,000 households.

### Emissions and waste

Elkem accounts for around 65 % of the greenhouse gas emissions from Orkla's own production, generating a total of 1.35 million tonnes of CO<sub>2</sub> equivalents (excluding Elkem Aluminium) in 2008. This is a reduction from 2.0 million tonnes in 2007, which included Elkem Aluminium's emissions.

As a result of continuous focus on process and operational improvements, emissions of CO<sub>2</sub> and other greenhouse gases are now approaching a theoretical minimum level. There is very little potential for further reductions in emissions per tonne of metal produced without developing entirely new processes for the manufacture of ferro-alloys.

Orkla's climate accounting for 2008 also includes emissions from purchased energy, bringing total emissions of CO<sub>2</sub> to 1.8 million tonnes. Purchased energy accounted for 34 % of emissions.

Elkem's total emissions of SO<sub>2</sub> have continuously been reduced over many years. From 1999 to 2008, Elkem's SO<sub>2</sub> emissions in Norway were cut by close to 40 %, from roughly 5,500 tonnes to 3,300 tonnes. This reduction was achieved through a combination of a switch to the manufacture of products with lower emissions per weight unit and a focus on using low-sulphur coal.

Emissions of nitrogen oxides (NO<sub>x</sub>) are predominantly generated by the smelting furnace process for the production of ferrosilicon (FeSi) and silicon metal.

The installation of new equipment and the establishment of improved process controls have reduced NO<sub>x</sub> emissions since 2000. NO<sub>x</sub> emissions in 2008 totalled 4,900 tonnes, compared with 4,630 tonnes in 2007. The increase is ascribable to higher production in 2008.

At the Elkem Bremanger plant in Norway, a surveillance programme has been established to monitor discharges in the fjord Nordgulen, where a deposit was in use from 1988 to 1993. The fjord continues to show environmental improvement. At Elkem Carbon in Kristiansand, steps have been taken to reduce PAH emission to the fjord and to monitor compliance with emission levels.

The amount of waste generated has fallen significantly in the past few years, and most of the waste is now recycled. Several of the plants placed greater emphasis on waste sorting and employee training programmes in 2008, with a view to further improving waste utilisation.

There were no serious non-conformances with environmental licences and permits in 2008. Current measurements show that no emissions exceed local air quality standards or other requirements imposed by the authorities.

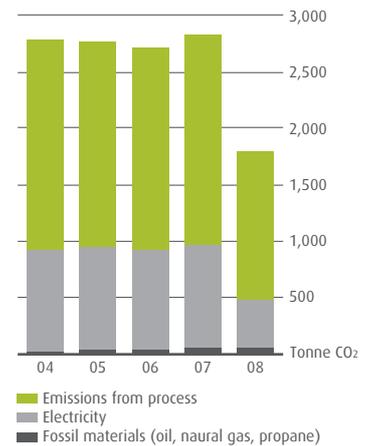
### Raw materials

Elkem inspects raw materials for important environmental elements, such as their content of sulphur and certain selected trace elements. This data is included in reporting to the Norwegian Pollution Control Authority (SFT) on the Norwegian plants' emissions of hazardous substances.

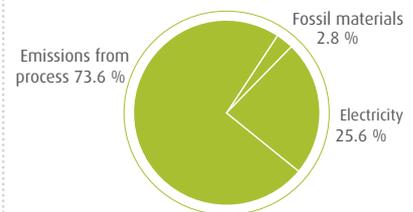
Conditions for the safe storage of raw materials and chemicals in tanks and silos are continuously monitored through internal and general audits.

A review of internal procedures was initiated in 2008 to ensure the systematic monitoring of suppliers' compliance with Elkem's requirements as regards good, safe work conditions for their employees.

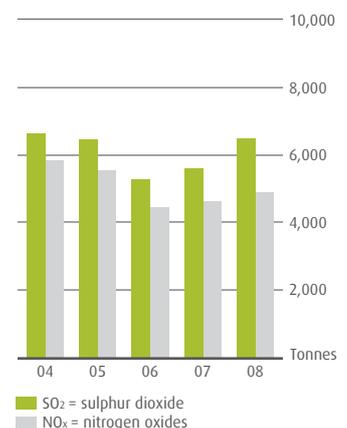
TOTAL CO<sub>2</sub>-EMISSIONS FOR ELKEM 2004-08



ALLOCATION OF CO<sub>2</sub>-EMISSIONS FOR ELKEM 2008



EMISSIONS TO AIR – SO<sub>2</sub> OG NO<sub>x</sub>



## Elkem

### Products

The start-up phase at Elkem Solar's NOK 4 billion plant in Kristiansand for the production of Elkem Solar Silicon® commenced at the end of 2008 (see separate focus article). Production will gradually be ramped up in the course of 2009.

As from 2008, it was forbidden to deposit cathode blocks from the aluminium industry on landfill sites in the EU. Elkem has built a demonstration plant for recycling cathode blocks (spent pot lining) at Elkem Bjølvfossen, which was ready to begin operating at the end of 2008.

In 2008 Elkem has worked on adapting its operations to meet the requirements of the EU's Regulation on chemicals and their safe use, REACH (Registration, Evaluation, Authorisation and Restriction of Chemical Substances) by ensuring that necessary chemicals are pre-registered with the European Chemicals Agency (ECHA).

### The local environment

Very few complaints from neighbours were registered in 2008, and most of them concerned emissions of dust and noise. Each complaint is registered and followed up by contacting the complainant, providing information and, if necessary, taking appropriate action.

### Other matters

All Elkem factories are certified in accordance with the ISO 9000 quality management standard. Several of the factories are also certified in accordance with the ISO 14001 environmental management standard, and those that are not certified operate as a minimum in compliance with ISO 14001 (primarily on the basis of the Norwegian system of internal control).

## MEASURES AND PLANS

### Health and safety

Focus on promoting safe behaviour through job observation, high-quality follow-up of EHS non-conformances and training and awareness-enhancing programmes with particular emphasis on



EHS will be maintained in 2009. The systematic efforts to monitor contract personnel and suppliers on plant sites will also continue.

Elkem will continue to focus on maintaining sickness absence through the active involvement of management and individual follow-up of persons on sick leave (cf. the Inclusive Working Life agreement in Norway).

### Energy

Energy efficiency and energy recovery will continue to be high priorities in 2009, and energy management will be an integral part of EHS work. Many plants are examining the possibilities of utilising district heating in their own operations and in the local community. Improvement plans include reducing consumption of electricity for heating, replacing energy-intensive machinery and lowering consumption of compressed air.

Elkem has entered into an agreement with a district heating company, Orkdal Fjernvarme (OFAS), to supply waste heat from Elkem's smelting plant at Thamshavn. By recovering energy from the processing plant and supplying hot water to Orkdal Fjernvarme's network, the waste heat that used to be discharged into the fjord will now be used as heating for Orkdal's industry and housing. When this service starts up in 2009, it will be technically possible to supply up to 12 GWh/year, but in time this is expected to increase by up to 30 GWh/year.

### Emissions and waste

Elkem and the other players in the Norwegian process industry have established the Processing Industry Environment Fund. Through an agreement with the Norwegian authorities, the industry has pledged to reduce emissions of SO<sub>2</sub> by 5,000 tonnes per year by 2010. In 2001, Elkem paid

approximately NOK 15 million in SO<sub>2</sub> tax, but since 2002, it has paid comparable amounts to the Environment Fund. The Fund gives priority to the emission-reducing measures that generate the greatest effect in relation to the investment. In 2009, a decision will be taken on where sulphur scrubbers will be installed.

Efforts have been initiated to optimise and monitor NO<sub>x</sub> emissions from the ferrosilicon and silicon plants. These plants will also set up dust and noise abatement programmes to improve the indoor and outdoor environment.

Elkem Bremanger and Elkem Carbon Fiskaa will continue to monitor discharges to water.

### Raw materials and products

Work has commenced on establishing new audit standards, training the company's internal auditors and implementing measures to monitor suppliers.

In 2009, Elkem Bjølvfossen in Norway will conduct pilot tests on the destruction of Spent Pot Lining (SPL), a by-product of aluminium manufacturing. The goal is to produce a stable slag that binds toxic elements in the SPL and utilise the carbon material to make ferrous products. If the pilot plant proves to be a success and other conditions are favourable, NOK 100 million will be invested in a plant that will solve the environmental problem posed by SPL. A plant of this type will also be able to recover other types of waste.

### Other matters

Elkem's ferrosilicon and silicon plants in Norway applied to renew their emission permits in 2007, and expect to receive updated permits in 2009. Elkem's ferrosilicon plant in Iceland applied to renew its emission permit in 2008, and expects to receive an updated permit in 2009.

# Borregaard

Borregaard's biorefinery, which uses timber as its raw material, is sustainable and environment-friendly – even when the company's energy consumption and production processes are taken into account.

Economising on energy is one of Borregaard's highest environmental priorities, and energy management is an integral part of the company's EHS work.

## RESULTS AND ACTIVITIES IN 2008

### Health and safety

The Lost Work Day Rate (LWDR - number of injuries leading to absence per million hours worked) for Borregaard as a whole was 5.2 in 2008. This is an improvement from 2007, when the LWDR was 7.6. At the Sarpsborg plant, where half of Borregaard's employees work, the LWDR was 3.9 in 2008. Borregaard LignoTech's facilities outside Norway were able to report an LWDR of 0 in December 2008 (see focus article).

The Total Recordable Rate (TRR - number of injuries leading to absence, need for medical treatment or restricted work per million hours worked) provides a better overall indication of the level of safety than the LWDR, because the consequences of an accident can be arbitrary and the borderline between absence and non-absence can depend on a number of factors such as the type of job, physical strain, etc. By recording all accidents, the uncertainty as regards subjective interpretation of statistics is eliminated. TRR has therefore been adopted as an important measurement to achieve improvement. The TRR for Borregaard as a whole was 18.8 in 2008, down from 22.7 in 2007.

No accidents resulting in death or serious, permanent injury to employees were recorded in 2008. Measures have been implemented at all Borregaard plants to reduce the risk of injury and improve employee attitudes to safe job performance. In connection with the BF2010 improvement project at Borregaard Fabrikker, several measures have been introduced to improve safety, among other things relating to procedures and training.

Borregaard arranged a joint safety forum in 2008 for all its businesses to enable them to learn from each other's experiences and coordinate EHS activities. Matters related to EHS are part of the company's management evaluation criteria.

Sickness absence in Borregaard's Norwegian companies was 5.9 % in 2008, which was lower than in 2007, when the sickness absence rate was 7.7 %. Implementing the Inclusive Working Life agreement is part of the company's systematic health, environment and safety efforts in Norway. The sickness absence rate for Borregaard LignoTech's operations outside Norway was 2.2 %, on a par with 2007.

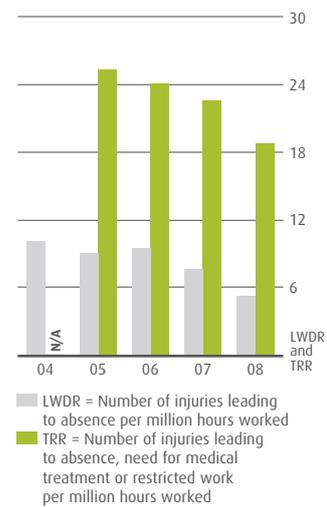
### Energy

Energy consumption for all Borregaard units totalled close to 3.1 TWh in 2008. Approximately two-thirds of all energy consumed is thermal energy. Around half comes from renewable sources such as biofuel, energy recovered from industrial processes and waste incineration, while over 40 % comes from the burning of fossil fuel.

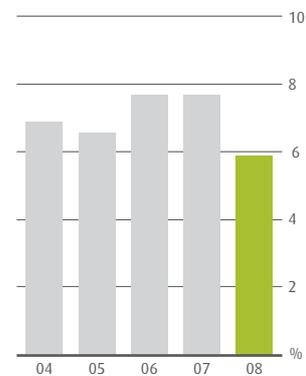
Energy consumption in 2008 was at the same level as in 2007, despite increased production. Furthermore, the percentage of oil-based heat production decreased. Since 2005, a number of energy-efficiency measures have been carried out, resulting in energy savings of 195 GWh. The energy economised in 2008 alone totalled 21 GWh. The most important single measure was the completion of a new after-screening stage in the bleaching plant, which entailed the closing of processes and recirculation of hot water.

In 2008, Borregaard produced around 525 GWh of hydroelectric power at its own plant in Norway. In terms of volume, this is over 60 % of the company's own consumption of electricity.

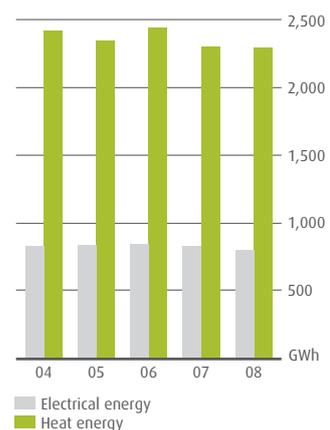
LOST WORK DAY AND TOTAL RECORDABLE INJURIES



SICKNESS ABSENCE IN BORREGAARD'S NORWEGIAN OPERATIONS



CONSUMPTION OF ENERGY



## Borregaard



### Emissions and waste

In the summer of 2008 there was an outbreak of Legionnaire’s Disease in the Sarpsborg-Fredrikstad area, as a result of which five persons became infected, two of whom died. According to the official report following the outbreak, no common source of infection can be identified with certainty, but it is reasonable to assume that stage 2 of Borregaard’s biological treatment plant was directly or indirectly involved in the spread of legionella bacteria in the area.

In the light of the official report and risk assessments carried out by external international experts, the action taken by Borregaard in the wake of the outbreak has been aimed at ensuring that possible sources of contamination are secured by a good margin. All the measures were reviewed by and discussed with the authorities prior to implementation.

Stage 2 of the biological treatment plant has been closed until further notice and disinfected. Steps have been taken to treat discharges into the Glomma River that do not pass through the treatment plant. The air scrubber has been rebuilt, and several new measures have been introduced, including the installation of an extra treatment stage before the water enters the scrubber, and the use

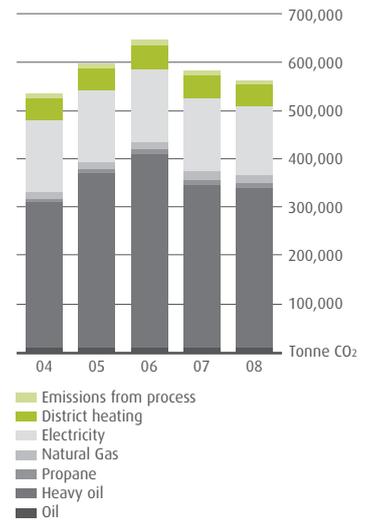
of chemicals to prevent the growth of legionella bacteria in the facility. Stringent cleaning and disinfection procedures have been further expanded and now include the use of high temperatures and new washing systems.

One of the company’s environmental challenges is related to discharges of organic material (COD and suspended matters stemming from the raw material, timber) to water at Borregaard’s cellulose and wood-based chemicals plants in Norway and Switzerland.

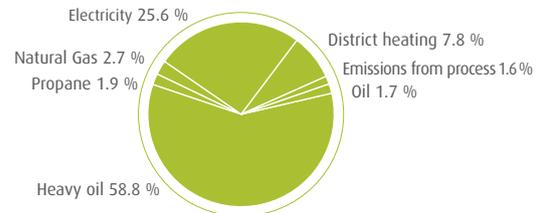
In March Borregaard Schweiz signed an agreement with the authorities regarding the systematic reduction of discharges to the Aare river. In autumn 2008 a decision was made to close the plant, but Borregaard will continue to operate the chloralkali factory for another couple of years.

Discharges of organic material (COD) at Borregaard’s factories in Norway and Switzerland exceeded the discharge licence in 2008, and this was reported to the authorities. At Borregaard Fabrikker in Norway, discharges increased by 10 % in the second half of the year due to the closure of one stage of the biological treatment plant. Discharges at the Borregaard plant in Switzerland were

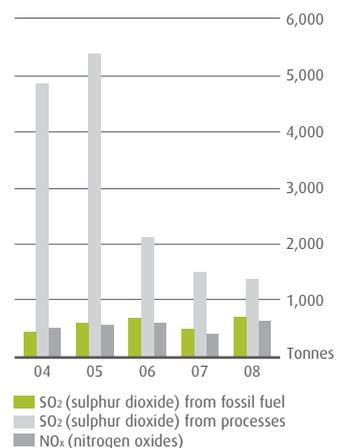
TOTAL CO<sub>2</sub>-EMISSIONS FOR BORREGAARD 2004-08



ALLOCATION OF CO<sub>2</sub>-EMISSIONS FOR BORREGAARD 2008



EMISSIONS TO AIR – SO<sub>2</sub> OG NO<sub>x</sub>



## Borregaard

high in the first quarter, but were reduced by 30 % in the third quarter.

Process improvements were carried out at the Borregaard Sarpsborg plant in 2008, which are helping to lower discharges of organic material. An equipment breakdown led to higher discharges of copper, and procedures to monitor the technical state of this equipment and associated maintenance routines have now been improved.

Borregaard's emissions of CO<sub>2</sub>, which totalled 375,000 tonnes in 2008, are largely related to the use of fossil fuel for heat production. Emissions declined slightly from 2007, when they totalled 384,000 tonnes. Orkla's climate accounting for 2008 also includes emissions from purchased energy, which brings total CO<sub>2</sub> emissions to 555,000 tonnes. Purchased energy accounts for 32 % of emissions.

Emissions of SO<sub>2</sub> are generated partly by the burning of fossil fuel and partly by cellulose processing, the production of ethanol and the production of biogas. Emissions at Borregaard Sarpsborg totalled 570 tonnes, down 4 % from 2007. A scrubber to reduce the SO<sub>2</sub> content of biogas was installed at the biological treatment plant in 2008, lowering SO<sub>2</sub> emissions by 18 kg per day.

Use of excess electric power to produce heat has led to less oil consumption and has reduced emissions of SO<sub>2</sub>, CO<sub>2</sub> and NOX by 5 % from 2007.

The old waterworks at Borregaard Fabrikker was demolished in 2008, and 95 % of the materials were recycled. The old 147-metre-high boiler house chimney was also torn down, and the materials were recycled. The new boiler house chimney at the Sarpsborg plant is equipped with an SO<sub>2</sub> scrubber. The chimney began operating in summer 2008 and removes 95 % of SO<sub>2</sub> emissions from the boiler house.

### Other matters

Most of Borregaard's units are certified according to the ISO 9001/2 quality

management standards. Several are also certified according to the ISO 14001 environmental management standard and SS627750 energy management standard. Borregaard is committed to complying with the guidelines laid down in the voluntary international environmental programme Responsible Care.

The Borregaard plant in Switzerland was closed in 2008. This has impacted Borregaard's production of lignin and production of speciality cellulose, yeast and ethanol. The LignoTech Finland plant was also closed in 2008.

## MEASURES AND PLANS

### Health and safety

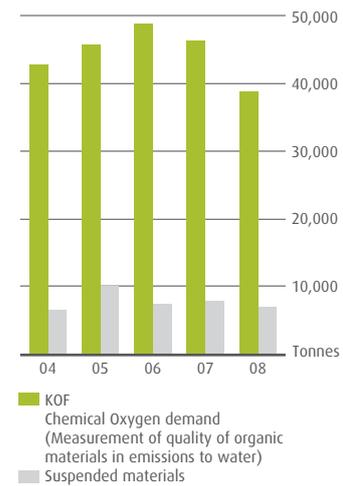
To further reduce sickness absence, efforts in this field will be intensified. In the Norwegian companies, this will be done with the framework of the Inclusive Working Life Agreement. The prevention and reduction of sickness absence is seen in conjunction with other EHS work. The department managements' contact with and care of persons on sick leave are important areas of focus.

Systematic efforts are made to increase safety and reduce injury rates. Injuries that do not lead to absence are also registered and followed up in order to identify and reduce factors that may constitute a safety or injury risk. The collaboration on safety established with DuPont has produced good results for Borregaard LignoTech's operations outside Norway. These joint efforts will continue in 2009.

### Energy

Reducing oil consumption is an important challenge for Borregaard, especially at its plant in Norway. Borregaard has built several facilities based on renewable energy, thereby lowering its oil consumption. The company is also currently building yet another energy recovery plant based on waste (external owner). This will cut oil consumption by 200 GWh or 20,000 tonnes per year. The plant will be completed in autumn 2009. The use of biofuel has also increased as a result of improved utilisation of bark

EMISSIONS TO WATER - KOF AND SUSPENDED MATERIALS



## Borregaard

and residuals from the production process.

Economising on energy is one of Borregaard's highest priority environmental tasks. Energy management must be an integral part of the company's EHS work, because reducing energy consumption will reduce oil consumption, since oil or fossil fuels are used to cover marginal and top energy supply loads.

Work on rehabilitating and renovating the power plant in Sarpsborg was in progress throughout 2008. When the work is completed in 2009, power production will increase by 55 GWh as a result of higher efficiency and better utilisation of floodwater. The renovation entails no negative impacts on the environment.

### Emissions and waste

Borregaard wishes to give priority to minimising adverse effects in the form of odours and noise generated by its operations.

Borregaard works continuously on a variety of projects to reduce emissions to air and discharges to water of substances that have an impact on the environment. Improvement programmes are based on use of the "best available technology" and achievable emission/discharge levels.

There is still a lack of knowledge about legionella bacteria. Gaining a deeper understanding of all the factors related

to legionella is important, both for Borregaard and for society at large. Borregaard contributes to, and has itself initiated, several studies on the growth and spread of legionella. The authorities and centres of expertise in Norway and abroad have been involved in these efforts.

Borregaard will make preparations for closing the Opsund landfill, which is located on the company's Sarpsborg site and has been in use since the early 1900s.

### Raw materials

Borregaard gives priority to timber from forests that are managed according to internationally recognised principles for sustainable forest management. As far as possible, Borregaard wishes to prioritise the use of timber from its own vicinity, thereby reducing the need for transport. Through its trade organisation in Norway, Borregaard has also contributed to the further development of certification systems for Norwegian timber.

Borregaard has commissioned a study by Østfoldforskning aimed at analysing and documenting climate impacts in connection with its biorefinery concept. Preliminary analyses show favourable values compared with those of substitutes based on petrochemical raw materials.



# 2008

## THE BUSINESS AREA

Sapa develops, manufactures and markets value-added aluminium profiles, profile-based building systems and aluminium strips for heat exchangers. The company comprises three main business areas: Sapa Profiles, Sapa Building System and Sapa Heat Transfer. Its business concept is based on close cooperation with customers. Sapa is leading in its field and serves customers in the building and construction, transport, engineering and telecom industries.

ORKLA ALUMINIUM SOLUTIONS

# EHS AS A FUNDAMENTAL STRATEGIC PILLAR

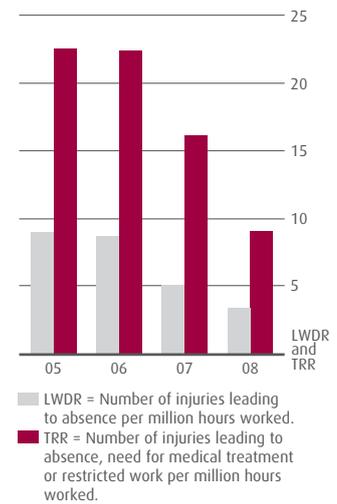
Environment, health and safety are one of Sapa's fundamental strategic pillars. The Lost Work Day Rate (LWDR) and the Total Recordable Rate (TRR) are reported every month, along with a detailed description of all injuries and the factors that caused them.

Sapa has developed new products with special environmental properties for the automotive and building markets, including materials that withstand high temperatures in order to meet the requirements of future emissions regulations for the automotive industry, and energy-efficient building solutions.

# Sapa



LOST WORK DAY AND TOTAL RECORDABLE INJURIES



Sapa has reduced the incidence of serious accidents by over 60 % since its profile operations were merged with Alcoa’s profile business in June 2007.

Sapa has developed new products with special environmental properties for the automotive and construction markets, including materials that withstand high temperatures in order to meet the requirements of future automotive emissions standards, and energy-efficient building solutions.

continued in 2008, and 12 factories received training in promoting companies’ own EHS work and providing practical assistance and support to production staff. All production plants have EHS committees, in addition to which EHS networks have been established with a view to raising employee awareness of EHS issues and exchanging best practices.

## RESULTS AND ACTIVITIES IN 2008

### Health and safety

In 2008 Sapa achieved a Lost Work Day Rate (LWDR) of 3.4, down from 5.1 in 2007. The company also improved the Total Recordable Rate (TRR) to 9.1 in 2008, from 16.1 in 2007.

In 2008, there were 205 fewer serious injuries than in 2007, equivalent to a reduction of 46%. Thirty enterprises had zero recordable injuries in 2008. The Rapid Improvement Team (RIT) training con-

A detailed system for the reporting and classification of incidents continues at all Sapa factories to ensure uniform reporting and compliance with international standards. The use of hazard spotting and the reporting of injury free events are encouraged at all locations and many locations have targets in place for reporting and for completion of actions.

The standard of housekeeping is a key parameter for EHS activities, and intensified focus on these conditions through a systematic approach (5S

## Sapa

techniques) and housekeeping audits has led to an improvement in Sapa units.

All locations perform health monitoring for exposed employees and the process of qualitative and quantitative health surveys are being used to determine the extent of health exposure to noise, chemicals, vibration, ergonomic factors.

The sickness absence rate was 4 % in 2008, compared with 3.1 % in 2007.

### Energy and emissions

Sapa's energy consumption totalled 3,000 GWh in 2008, 30 % of which was electricity and 70% was thermal energy.

Total NO<sub>x</sub>-emissions were further reduced by 218 tonnes from 2007, as a result of efficient operations and improvements in furnace design. In the past three years, NO<sub>x</sub> emissions have been reduced by 68 %.

CO<sub>2</sub> emissions from Sapa's own production totalled 395,000 tonnes in 2008, which is an increase from 345,000 tonnes in 2007. Total CO<sub>2</sub> emissions, including emissions from purchased energy, amounted to 730,000 tonnes in 2008. Purchased energy accounted for close to 40% of emissions.

No serious non-conformances were reported in relation to emission licences in 2008.

### Waste

Waste generated in 2008 totalled 106,000 tonnes, of which 79 % was recyclable waste.

Sapa's plants have focused on reducing waste, with particular emphasis on the use of sodium hydroxide (caustic soda) and packaging materials for finished goods. Caustic soda is used to clean dies of aluminium, and is part of the anodizing and surface treatment process. The use of caustic soda was reduced by over 16% (down 2,100 tonnes) as a result of the introduction of new production techniques and more efficient use of caustic soda in die cleaning. All the companies reduced their use of packaging materials, and use of cardboard, wood and plastic was

reduced by over 10,000 tonnes compared with 2007.

### Raw materials and chemicals

A risk assessment of all hazardous substances used at the factories is undertaken to determine risk related to use, storage, transport and waste management. Sapa also assesses the need for control measures to eliminate the risk of contamination and to mitigate potential negative consequences.

### Products

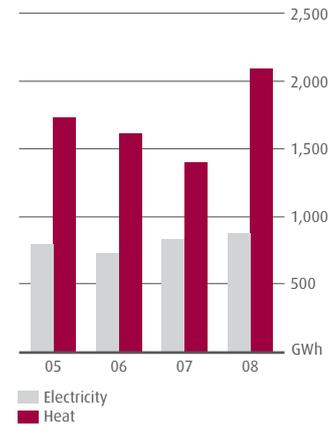
New products with special environmental properties have been developed for the automotive and construction markets. Product development at Sapa Heat Transfer is focused on materials that withstand high temperatures with a view to meeting the requirements of future automotive emissions standards. Sapa Building System is currently developing energy-efficient building solutions, and Sapa Profiles works closely with customers on an ongoing basis to find innovative new environment-friendly solutions. Significant resources are being invested to be able to serve the new solar energy market. Risk assessment techniques and life-cycle analyses are also used in the development of new products.

### Other matters

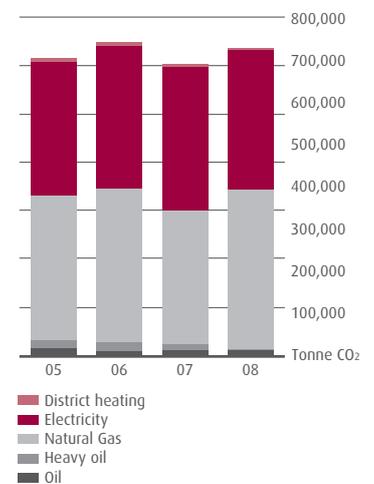
Sapa's integrated EHS management system is in compliance with both the BS OHSAS 18001 Occupational Health and Safety Management standard and the ISO 14001 Environmental Management standard. Most of Sapa's factories are certified under the ISO 9000 standard, and many are certified under the ISO 14001 standard, besides which many factories operate in compliance with this standard.

The Sapa Group implements environmental management to a varying degree. Many companies, particularly in Europe, are certified under the ISO 14001 Environmental Management standard, while others have established internal systems that comply with the principles of this standard.

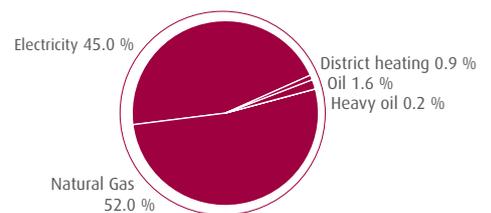
CONSUMPTION OF ENERGY



TOTAL CO<sub>2</sub>-EMISSIONS FOR SAPA 2005-08



ALLOCATION OF CO<sub>2</sub>-EMISSIONS FOR SAPA 2008



## Sapa



### MEASURES AND PLANS

#### Health and safety

Sapa has drawn up an EHS plan that is integrated into Sapa's business system, Genesis. This overarching plan will be introduced at all factories as and when it is appropriate based on the situation at the various companies.

Sapa has developed numerous EHS systems and policies, and will continue its efforts to implement systems and training programmes in 2009 and the years ahead. Among other things, courses will be arranged by the company's own "EHS University" in 2009 to create a new forum for enhancing the know-how and skills of Sapa personnel in this field.

#### Environment

In 2009 an on-line reporting system will be introduced to register strategic environmental data and health and safety information.

#### Energy

Sapa is currently taking steps to rationalise energy consumption through the use of energy-efficient engines and lighting and fuel-efficient furnaces. Efforts to promote improvements and the transfer of best practices will be intensified in 2009.

#### Emissions and waste

Sapa will continue its efforts to reduce emissions, with greater focus on both CO<sub>2</sub> emissions and reporting and waste reduction and recycling.



# 2008

## THE BUSINESS AREA

Orkla Associates consists primarily of the investments in the Renewable Energy Corporation ASA (REC) (39.73 % stake) and Jotun AS (42.5 % stake).

ORKLA ASSOCIATES

# SOLAR ENERGY AND ECO-LABEL PAINTS

The companies are not required to report environmental data to Orkla and are therefore not included in this report.

### About REC

REC is a major actor in the solar energy industry. The business includes all parts of the value chain, from production of raw material to finished solar cells and modules. As a global actor, REC mainly serves markets in Europe, the US and Asia. The company has about 2,350 employees. REC business activities are organised in the three divisions REC Silicon, REC Wafer and REC Solar.

Read more at: [www.recgroup.com](http://www.recgroup.com)

### About Jotun

Jotun is one of the world's largest manufacturers of paints and powder coatings. The Group has 71 companies and 40 production facilities on all continents. In addition Jotun has agents, branch offices and distributors in more than 70 countries. The Group has a total of 7,100 employees. Jotun's operations cover development, production, marketing and sale of paint systems and products designed to protect and decorate surfaces in the residential,

shipping and industrial markets. The Jotun Group comprises four divisions: Jotun Dekorativ, Jotun Coatings, Jotun Paints and Jotun Powder Coatings.

Read more at: [www.jotun.com](http://www.jotun.com)

# 2008

## THE BUSINESS AREA

Orkla Financial Investments comprises the Share Portfolio, Orkla Finans and Orkla Eiendom. The Share Portfolio manages one of Norway's largest share portfolios, consisting of investments mainly in the Nordic region. Orkla Finans offers investment services to institutional and private investors, while Orkla Eiendom invests in and develops property. The business area also comprises Borregaard Skoger, which develops and manages Orkla's forest properties.

## ORKLA FINANCIAL INVESTMENTS

# GREEN INVESTMENTS

This business area has built up expertise on investments in environment-related projects, and the Share Portfolio staff includes analysts specialised in green investments. Orkla Finans focuses on power and energy, as well as on the CO<sub>2</sub> emissions quota market. Orkla Eiendom emphasises EHS at every stage of its building projects

# Orkla Financial Investments

## The Share Portfolio

Orkla Financial Investment has built up expertise on investments in environment-related projects, and the Share Portfolio staff includes analysts with special expertise in green investments. Collaboration has also been established in this area with the research departments at Borregaard and Elkem. Projects that combine environment-friendly technology and a good return on investment are assessed on an ongoing basis.

## Orkla Finans

Orkla Finans makes investments in the environmental and energy sector, focusing on both power and energy and on the CO<sub>2</sub> quota market.

As the various technologies are enhanced, production of renewable energy is becoming increasingly profitable. This growing profitability is attracting considerable interest from the capital market. Orkla Finans has two funds, the Orkla Energy Fund and the Orkla Carbon Fund, which invest in energy and CO<sub>2</sub>, respectively.

Both the Orkla Energy Fund and the Orkla Carbon Fund are managed by Orkla Finans Commodity Trading AS. Elkem Energi Handel AS and Orkla Finans Kapitalforvaltning AS each own 50 % of Orkla Finans Commodity Trading AS.

## Orkla Eiendom

Orkla Eiendom focuses on eco-efficient, environmentally sound solutions, which it applies in its real estate projects. Both new properties that are purchased and the buildings already in the unit's portfolio are carefully reviewed to ensure that energy use is properly managed. Both environmental gains and lower operating costs can be achieved by simple means through the implementation of energy-saving measures.

Orkla Eiendom is also working on the further development of new eco-efficient solutions, such as:

- Recovery of surplus heat from sewage

water and from ventilation

- Efficient management of lighting in common areas to achieve savings in terms of lifetime and lower energy consumption
- Use of solar energy. While the effect of solar energy in Norway is reduced for parts of the year, it can nevertheless be an effective source of energy for charging battery-powered back-up systems. Thanks to new advances in solar cell technology, this type of solution will be more cost-effective and eco-efficient in the coming years

Real estate development is also active social development, and several of Orkla Eiendom's projects involve the renewal of old industrial areas, which are converted into modern residential and commercial properties. Given the Orkla Group's many industrial operations, this type of development project will be a key component of Orkla Eiendom's portfolio.

Environment, health and safety are emphasised at every stage of project implementation, both in connection with contractors' activities on building sites and with the project's local surroundings. Orkla Eiendom carries out systematic inspections of its contractors, with a view to ensuring a good, professionally qualified workforce on building sites and the establishment of satisfactory routines and quality assurance systems. While building projects are being carried out, regular inspections, spot checks and audits are conducted of contractors' quality assurance systems. This work has produced very positive results in the form of marginal incidence of injuries at building sites and effective handling of negative impacts on the environment.

## Borregaard Skoger

Orkla owns a total of 1,080,000 decares, of which 780,000 are productive forest. Borregaard Skoger AS is responsible for the management of these properties, which is firmly based on the principle of sustainable forestry.

Environmental certification and envi-



ronmental registration have been priorities for Borregaard Skoger, and key biotope registration or environmental registration has now been carried out on all properties. The operative forestry business is run by an operating company, Statskog Borregaard Skogsdrift AS (SB SKOG), whose environmental management system has been certified by Det Norske Veritas (DNV) since 1999. The company is certified in accordance with the ISO 14001 environmental management standard and the 'Living Forest' standard for sustainable Norwegian forestry. The standard contains 25 requirements, all of which cover areas and measures that have an environmental impact or are significant for forestry activities. The operating company aims to establish ISO 9001-certified quality assurance procedures by the end of 2009.

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In addition to the annual report  
Orkla also publishes an EHS report  
and a sustainability report. These  
are available at [www.orkla.com](http://www.orkla.com)