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Frontpage: Better homes – also for vulnerable families

In Høje-Taastrup in Denmark, the social housing company of Lejerbo has chosen to build its first modern zero-energy homes. The buildings are made for disabled children and their families. It is one of the first building projects to benefit from the innovative ROCKWOOL ROCKSHELL system that helps enable efficient completion of very low-energy homes.

Photo: [1] Erhvervsfoto.dk [2] Top, Niclas Jessen – middle, colourbox – lower middle, Niclas Jessen – bottom, Erhvervsfoto.dk [3] Niclas Jessen (4+5] Behrendt & Rausch [9] colourbox [11] Shutterstock, ARENA creative [13] ROCKWOOL FOUNDATION [14] colourbox [16] ROCKWOOL Adriatic [17] ROCKWOOL Russia [18] shutterstock, Tyler Olson [19] shutterstock, Kuttelvaserova [20] ROCKWOOL Scandinavia [22] Niclas Jessen [25] colourbox [26] Niclas Jessen [28] ROCKWOOL Adriatic [30] Adam Lach.



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Insulation – an essential part of tomorrow's low-energy society

Energy keeps modern society afloat. Fossil fuels provide some 87% of our energy needs. Despite the global economic crisis, energy prices remain high, putting an extra burden on business, private households and public budgets. With only a few countries controlling most of the remaining known reserves of natural gas and oil, and millions of poor people aspiring for a better standard of living, our security of energy supply is coming under increased pressure. This is not sustainable. Something needs to be done. We do have the technical ability to stop the wasteful use of expensive energy. But the transformation needs to start today.

Buildings - the low hanging fruit

Buildings account for approximately 40% of the energy consumption in modern society. In emerging economies where millions of people are moving into towns and cities – requiring air conditioning of offices, homes and supermarkets – energy

demand in buildings is also growing rapidly. On a global scale a 75% reduction in the energy use of buildings would be both possible and rational as a long term target.

By making our buildings energy efficient, we can save billions – both in energy costs and in tonnes of CO_2 . More than a million green growth jobs can be created, not least in the construction industry where, in numerous countries, idle hands are far too many. Increased energy efficiency in buildings is an opportunity which must not be missed.

Insulation is an essential part of tomorrow's low-energy society. In cold climates it works as an overcoat that helps keep freezing outdoor temperatures at bay. In hot climates, it helps prevent the heat from penetrating the roof or facade. Insulation improves the quality of life by enabling a better and more stable indoor environment.

"The built environment provides low-cost and short-term opportunities to reduce emissions, first and foremost through improvement of the energy performance of buildings. The Commission's analysis shows that emissions in this area could be reduced by around 90% by 2050, a larger than average contribution over the long-term."

EU Commission, page 9, COM(2011) 112 final, A Roadmap for moving to a competitive low carbon economy in 2050

> http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0112:FIN:EN:PDF

On the political agenda

Energy efficiency in buildings is now becoming increasingly important on the political agenda. The EU has decided that new buildings must reach nearly zero energy levels as of 2021. Public buildings must take the lead, establishing this requirement two years earlier, i.e. from 2019. Buildings undergoing major renovation must also adhere to these low-energy requirements whenever technically and financially feasible. European governments are now introducing the strongest stepwise improvements of energy efficiency codes seen in history. In many countries, more than a doubling of insulation standards will be required over the next 6-8 years.

The greatest number of new buildings is in the Asian economies where insulation levels are currently low. According to the UN Intergovernmental Panel on Climate Change (IPCC), $\rm CO_2$ emissions from buildings are projected to increase by more than 50% by 2030, mainly in East Asia. In the last couple of years, the ROCKWOOL Group has built or acquired addi-

tional insulation factories in China, India, Thailand, Malaysia and Russia, and a new state-of-the art factory will be built in the USA where there is also a huge need to reduce the amount of energy used for cooling and heating buildings. In China, energy efficiency of buildings is now an integral part of the nation's five-year-plan as a means to improve the security of energy supply and to abate air pollution from fossil fuel. Energy exporting Russia has also set a goal to improve its energy efficiency per GDP unit by 40% by the year 2020.

Energy modernisation has the greatest potential

According to the IPCC the biggest cost effective potential for ${\rm CO_2}$ savings lies in the modernisation of the existing building stock. In its recent Roadmap for moving to a competitive low carbon economy in 2050, the EU Commission has also come to the conclusion that the built environment provides low-cost and short-term opportunities to reduce emissions and that greenhouse gas emissions from the building sector could be reduced by around 90% by 2050.

How many jobs?

EUR 1 million invested in upgrading the energy efficiency of our building stock will, on average, directly create 19 new jobs. This is the conclusion of the Rod Janssen & Dan Staniazek EU study "How many jobs?" This is a more potent job generating effect than even investments in energy supply.



> www.euroace.org

The "best climate and economic recovery programme"

In Germany, over the last two years, we have seen 250,000 to 340,000 jobs created or safeguarded per year, saved CO_2 emissions, and a virtual money machine that pays society back 4-5 euros for every euro it gives in subsidies or low-interest loans to energy efficient building projects. According to Jülich Research Centre 1> this is the outstanding result of Germany's KfW building energy efficiency programme. WWF has labeled Germany's energy efficiency scheme for buildings the "best climate and economic recovery programme".

"For every euro that went into the promotion of energy-efficient construction and refurbishment in 2010, public authorities collected four to five euros in revenue."







€ 11.2 bn



€ 21.5 bn





€ 5.4 bn



€ 1.8 bn



€ 1.4 bn

PUBLIC

FINANCE

INVESTED CAPITAL

LOANS KEW BANK MONEY HOUSE

MONEY INVESTMENT HOUSE IN ENERGY OWNER EFFICIENCY

=

JOBS CREATED OR SAFE-GUARDED

340,000

INCOME IN TAX PAYMENTS

COME BENEFI

BENEFITS
SAVED BY
LESS
UNEMPLOYMENT

€ 7.2 bn

RETURN OF INVESTED CAPITAL PUBLIC FINANCE

Many studies point in the same direction. According to McKinsey's Pathways to a Low-Carbon Economy, insulation retrofit of commercial buildings will give an economic gain of some EUR 70 per tonne saved $\rm CO_2$. The Ecofys concultancy ²> maintains that 460 million tonnes of $\rm CO_2$ – and EUR 270 billion in annual energy costs – can be saved in Europe alone, if buildings undergoing modernisation anyway were retrofitted to contemporary (low) energy standards.

Saving up to 80-90% of the heating energy consumption of a typical European building is not unusual if we use available low-energy solutions. But often barriers to progress need to be removed. Such measures include providing upfront financing and bridging the split-incentive dilemma where the landlord or building investor has little incentive to invest money in lowering the energy bill of tenants.

With the 2012 Energy Efficiency Directive, the EU now seeks to reach its goal of a 20% energy efficiency improvement in 2020. Among the levers used to achieve this goal are thorough energy modernisation of 3% of public buildings annually (though so far only central government buildings). Today it's not unusual to have energy modernisation rates only half that size. Further, energy companies must help to deliver savings each year equal to 1.5% of their energy sales to end-use customers.

Public advocacy

The ROCKWOOL Group engages actively with policy makers, NGOs and opinion leaders, the media and educational establishments, advocating green growth initiatives that can harvest the potential for profitable energy and CO_2 savings in buildings. For instance, the ROCKWOOL Group is Clean Energy Ambassador for the WWF 3 > supporting the vision and Energy Plan 4 > for making society so energy efficient that, by 2050, we can have the world's energy needs supplied by renewable sources in an economical way. The ROCKWOOL Group also supports the plea 5 > to the EU to increase its CO_2 reduction commitment from 20% to 30%. Stronger energy efficiency measures will make this achievable.

- 1 > http://www.kfw.de/kfw/en/KfW_Group/Press/Latest_ News/PressArchiv/2011/20111027 54324.jsp
- ² > www.eurima.org/campaigns/8/182/Buildings-waste-270-billion-EURO-a-year/
- ³ > www.rockwool.com/wwf+clean+energy+ambassador
- *> wwf.panda.org/what_we_do/footprint/climate_carbon_ energy/energy_solutions/renewable_energy/sustainable_ energy_report/
- ⁵ > www.rockwool.com/eu+CO2+30pct+plea

Governance, transparency and good business practices

Organisation and systems

The ROCKWOOL Group aims to run a transparent business based on honest and responsible business practices. Responsibility for implementing such practices lies with line management in both operating companies and at HQ. The responsibility for setting up appropriate Group-wide systems to enhance and secure these practices lies with the Group's CFO and the Senior Vice President of Human Resources. Measures and systems include performance management systems, regular progress reports from the subsidiaries, as well as training managers and staff-employees in relevant topics such as competition law.

Group Audit, which reports to the CFO, is responsible for monitoring compliance with Group policies. All Group companies are subject to Group Audits with a frequency of 1-2 years determined by an individual risk assessment, and also including a risk assessment of the country of operation. Deficiencies identified by Group Audit are reported upstream, with serious matters reported to the Executive Management and the Board of Directors' Audit Committee.

Audit of suppliers to the ROCKWOOL Group is arranged in co-operation with Group Procurement. Audit frequency is determined by an individual risk assessment, also taking into consideration the geographical location of the supplier. Focus is compliance with the ROCKWOOL Group's CSR policy. Deficiencies identified by the audits are reported upstream, with serious matters reported to the Executive Management and the Board of Directors' Audit Committee.

The ROCKWOOL Group has a set of policies, manuals and guidelines assisting employees from many different countries and cultures in defining responsible and honest decisions. These guidelines are communicated in many ways including on the intranet, in training sessions, at meetings and during performance reviews. A few of the main elements are listed here.

Anti-corruption

Bribery is unacceptable. We would rather lose a contract or wait longer for a permit than pay a bribe. To be part of the ROCKWOOL Group, employees must respect this ethic. Our

business ethics manual specifies different forms of 'undue' payments. It also defines things to avoid regarding conflicts of interest, donations, gifts and entertainment, marketing and sales, and contracts with agents. In 2011 we have registered no cases of bribery.

Preventing anti-competitive behaviour

Group Legal Affairs under the Senior Vice President for Human Resources is responsible for the policy against anti-competitive behaviour. Group-wide training of relevant employees takes place. Late 2010 and throughout 2011, Competition Law Compliance brush-up seminars were held in operating companies and in Group HQ. More than 100 employees participated.

Whistle-blower programme

The ROCKWOOL Group seeks to nourish a corporate culture of trust and constructive criticism where employees help guide each other towards responsible and transparent behaviour. For cases where this is not fruitful, the ROCKWOOL Group has for decades had a Principles of Leadership programme instructing employees to report non-compliance issues as far upstream in the organisation as necessary if their superior is not taking action. In 2012 the Group has established a complementary electronic whistle-blower system enabling employees to report non-compliance issues.

For an in-depth coverage of governance and business ethics, please see:

The corporate website:

> www.rockwool.com

The annual report:

> www.rockwool.com/annual+reports

The CSR progress report:

> www.rockwool.com/csr+reports



Football for peace. These Christian and Moslem children playing football together can hopefully contribute to peace and reconciliation in Lebanon. The CCPA organisation and the ROCKWOOL Foundation are working together on the project in this sharply divided country. Via the ROCKWOOL Foundation, almost a quarter of the dividends from ROCKWOOL International are used to the benefit of society.

The ROCKWOOL Foundation - a positive contribution to society

The ROCKWOOL Foundation is the largest shareholder of ROCKWOOL International A/S with 23% of the shares. This means that almost a quarter of the Group's dividend is spent for benevolent purposes. The Foundation supports social entrepreneurship and the principle of self-help in order to achieve lasting and sustainable improvements within food security and poverty alleviation, social engagement, development economics and international peace building. Our main benefactors are in Africa and the Middle East. The 'Fit for Kids' programme aims to improve the health of Danish

children. The ROCKWOOL Foundation Research Unit initiates empirically-based analyses related to current problems faced by society. The aim is to improve the knowledge base and the quality of public debate so that politicians can make informed decisions. The four areas of research are: migration and integration, shadow economy, work and the welfare state, families and children.

> www.rockwoolfoundation.com



How can stone wool contribute to sustainability?

Insulation can help to create a more sustainable future using less fossil fuel, providing better indoor environments and mitigating CO_2 emissions and high energy costs. Apart from the environmental, social and economic impacts of ROCKWOOL production and of our business practices that are described in later chapters and on our websites, how does stone wool as a material contribute positively or adversely to sustainability?

producer in the world and the foremost company within the challenging fire safety market of stone wool that is often used in the process industries where temperatures - and thus potential ${\rm CO}_2$ savings - are extremely high.

A traditional ROCKWOOL product for building insulation will, in its lifetime, save 162 times the ${\rm CO_2}$ needed for its production and other stages of its cycle.

The CO_2 reductions are even higher for insulation of hot industrial processes, for instance in power plants, petro-chemical industries and other hot industrial processes, where temperatures can exceed 200, 400 or even 600°C. On average, ROCKWOOL insulation for industrial processes and technical installations will save 20,000 times more CO_2 than was needed for its manufacture.

In total, the ROCKWOOL insulation produced this year will, in its lifetime, save more than 4000 million tonnes of CO_2 (4 GtCO_2) in buildings and industrial processes worldwide. 4000 million tonnes of CO_2 (4 Giga tonnes) equals one year's CO_2 emissions from Russia, India and Germany combined. Just the first year, the energy-saving insulation used in buildings and processes will reduce CO_2 emissions by 177 million tonnes - the equivalent of stopping all the annual CO_2 emissions from the Netherlands.

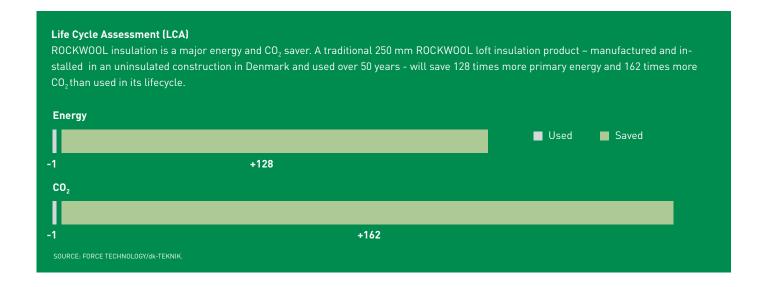
Environment

Positive energy balance

ROCKWOOL insulation is one of those rare industrial products that saves more energy in its application than is required in its life cycle. Over 50 years, a traditional ROCKWOOL loft insulation product can save over 100 times more primary energy than was used for its production, transport and disposal compared to an uninsulated construction. The energy balance becomes positive only five months after installation. Even more impressive are ROCKWOOL products that insulate hot pipes, for instance in power plants or industrial processes, where the energy payback can be less than 24 hours.

Mitigating climate change

The ROCKWOOL Group is one of the world's important CO_2 mitigating companies with a very positive net carbon footprint. The ROCKWOOL Group is the second largest insulation



Read the conclusion from the net carbon footprint assessment with PwC verification of its methodology. See the ${\rm CO_2}$ section of > www.rockwool.com/csr/environment

Ample rock resources - and ample recycling

Contrary to fossil fuel energy, the volcanic rock used in the production of ROCKWOOL stone wool is an ample resource, being present in large quantities in most regions. Every year the earth's volcanoes and plate tectonics produce 38,000 times more rock material than is being used to make ROCKWOOL stone wool. In addition, ROCKWOOL residue material is very often recycled. Our use of residue materials from other industries is nearly six times higher than the waste we deposit ourselves (see the chapter on recycling).

Environmental Product Declaration (EPD)

Environmental Product Declarations of building products are input for sustainable building assessments in the material categories of schemes such as BREEAM, DGNB, LEED and HQE. The sustainability performance of building products must be assessed in the context of the whole building, since the interaction between the components determines the performance. An Environmental Product Declaration is based on Life Cycle Assessment according to the international standards ISO 14040 and ISO 14044. The European standard EN15804 (published in 2012) provides the rules for all construction products and services on how to draft an Environmental Product Declaration. Several ROCKWOOL companies (e.g. in Germany, France, the Benelux, Spain and Norway) provide national EPDs.

Air

ROCKWOOL insulation uses no ozone depleting - or any other type of - foaming agents. What insulates naturally is ambient air, trapped between the stone wool fibres.

Durability

A building should last for 50-150 years, or even more. Accordingly, the insulation inside your wall and in your roof must perform well. Not just today, but over the entire lifetime of that construction. Even if you could reveal the poor performance of

an insulation material in your wall, it would be both troublesome and expensive to tear out the degraded material and install a better product instead.

ROCKWOOL insulation has a 75 year legacy of strong performance. Using only ambient air trapped between the stone fibres, ROCKWOOL insulation does not rely on gases such as blowing agents that might leak out of the product and thus weaken its thermal performance. ROCKWOOL insulation products are not easily affected by changes in temperature or humidity. They are highly durable, maintaining good thermal performance, mechanical strength and their specified dimensions.

Fire safety

Fire safety is a vital property of stone wool – as compared to many other types of insulation material.

ROCKWOOL stone wool is non-combustible and has a melting point above 1000°C. As a basic material it is generally rated in the best EU reaction to fire class - A1. Stone wool is often used as a fire barrier, for instance in walls, doors, around ventilation ducts and load-bearing constructions, and in marine and offshore applications.

With larger amounts of insulation being used in today's buildings, the choice of fire safe insulation and proper installation methods is becoming increasingly important in the event of fire. Over the last few years, an intense debate about the safety of combustible insulation and other combustible building materials has taken place in several countries.

A building that burns down too easily is not sustainable. Lives can be lost. Assets go up in smoke and must be replaced by new materials costing more energy use and emissions. The air, the ground and water may be contaminated by toxic emissions in the event of fire. According to the insurer FM Global, fire risk alone can add up to 14% to the potential carbon emissions over the lifetime of a facility exposed to extensive fire hazards.

Although some customers and regulators are beginning to put stronger emphasis on the fire safety of insulated constructions, there is still a long way to go before best practice



becomes common practice across the world. Some building sustainability assessment schemes such as the DGNB and the BREEAM take fire safety into account in their rating.

Combatting noise pollution

Noise pollution adversely affects the quality of life for millions of people. It reduces our ability to learn, be productive or to relax. It hampers good communication. Noise can even cause stress and may impact health.

The porous structure of stone wool absorbs noise and regulates sound. Soundproofing not only makes it more peaceful for those living next to noisy neighbours, it also enables people to have freer expression - for instance through their music or other sociable, yet noisy, activities.

A good night's sleep

ROCKWOOL insulation in walls, roofs and under floors helps prevent noise from the outside – or from adjacent rooms – penetrating the building. A good wall construction with ROCKWOOL insulation can help reduce noise transmission by more than 50dB ($R_{\rm w}$ - value) which is about 20dB more than a poor construction without insulation. A 10dB difference is perceived by the human ear as a doubling (or halving) of the audible sound. Machines that create ear-deafening noise can also be encapsulated with ROCKWOOL insulation. Traffic noise affects 40% of EU citizens and can reduce the value of property along major roads by 1.6% for every Decibel (dB) above 55dB. Along busy roads, stone wool in noise screens, or as ROCKDELTA vibration control under rail tracks, helps minimise noise and vibrations.

Assessment of sustainable buildings

Methods for rating the sustainability performance of a building differ. Check the ROCKWOOL Group's guide that helps you compare four international assessment schemes for sustainable buildings (LEED, BREEAM, DGNB and HQE):

www.rockwool.com/sustainability+in+the+rockwool+ group With ROCKFON acoustic ceilings, 'noise infernos' with disturbing echoes can be abated. A poor acoustic environment is not just a problem in offices, concert halls, cinemas and theatres but also in hospitals where patients need a tranquil environment in which to recover. Globally, millions of school years are disrupted by the adverse affect that noise can have on concentration and learning. At reverberation times of 0.7 seconds, only 67% of the spoken word remains comprehensible, falling to just 40% at 1.7 seconds.

Product safety aspects

It is the ROCKWOOL Group's policy to ensure the safe use of our products. A network of local Product Health & Safety officers - under the leadership of the Group Vice President for Product Ecology, Health & Safety – is on hand to guide our customers in the safe use of ROCKWOOL Group products.

Oil and binder

ROCKWOOL products typically consist of 95-98% inorganic (stone) materials and only 2-5% organic material. A highly refined oil makes the insulation water-repellent and reduces dust, plus a thermosetting resin binds the stone fibres together. This type of resin was used in Bakelite products e.g. telephones. The ROCKWOOL Group is continuously researching alternatives which would still safeguard the long-term performance (50+ years) of the products.

For the special circumstances where ROCKWOOL technical insulation is used for the first time around hot equipment (more than approx. 150°C), we recommend good ventilation for the first few hours until the (limited) organic content has been sufficiently burnt off. For normal building insulation at lower temperatures, no such precautions are necessary.

Indoor climate labeling

ROCKWOOL products in contact with the indoor climate are constantly being optimised in order to comply with the strictest indoor climate labels such as Blauer Engel (Germany), GreenGuard (North America) and the French VOC decree.

Dust & skin

Dust in the workplace must be reduced as much as possible. In 2002 the Danish National Institute of Occupational Health (AMI) and Danish Building and Urban Research concluded in



Noise abatement needed

More than half (56%) of British residents have been disturbed by noise in the past 12 months, with more than a fifth (21%) being disturbed more than six times by noisy neighbours. People living in high-rise flats suffer the most. More than half the noise disturbances occurred during the night, an ICM survey shows.

> www.rockwool.co.uk

their study that mineral wool mats did not cause the required limit values for airborne dust to be exceeded.

Nevertheless, handling of coarse fibres can cause a transient mechanical effect. Examples of coarse fibres that may annoy your skin until you wash or otherwise remove them are hair (after a haircut), sheep wool, coarse textiles and mineral wool. The mineral wool industry has made a set of recommendations > about how to handle products in a way that minimises transient itching of the skin.

Positive re-classification of stone wool

The World Health Organisation concluded in 2001 that rock (stone) wool should be removed from classification as a "possible human carcinogen". This positive re-classification was made because epidemiological casecontrol studies and long-term inhalation studies provided no evidence of increased risk

of lung cancer or any other cancers from occupational exposure to stone wool fibres.

No flame retardants needed

Brominated flame retardants that are used in parts of the insulation industry are under criticism for being bioaccumulative in the environment and possibly causing negative health effects. Other parts of the insulation industry use Boric acid as a flame retardant - this is also a substance of very high concern with a suspicion of having adverse reproductive effects. However, ROCKWOOL stone wool does not need or contain any flame retardants. It is made of rock and is therefore inherently fire safe.

> www.eurima.org/about-mineral-wool/health-safety

Environmental performance

ROCKWOOL insulation is among the important industrial products that, in its life-cycle, save vast amounts of energy. Energy is a resource that is critical for future generations. By saving fuel, ROCKWOOL insulation also reduces greenhouse gas emissions, acid rain and smog components by more than the pollution caused during ROCKWOOL production. Benefitting millions of people should never be an excuse for being complacent about any adverse environmental or social impacts locally. ROCKWOOL production must also be safe for our neighbours. The ROCKWOOL Group continually strives to make improvements in the sustainability performance of our production sites.

Key indicators

From 2005 to 2011, the ROCKWOOL Group achieved overall progress within all our three key environmental areas. As shown in the table, eight of ten key environmental indicators improved. The 2011 environmental key figures cover 23 ROCKWOOL factories. The three Asian factories acquired in 2011 are in the process of becoming fully integrated in the Group environmental key figures, and safety and auditing procedures.

The three key areas for determining the ROCKWOOL Group's environmental performance within our production are:

- Scarce resources: energy and potable water
- · Recycling & waste handling
- Air emissions

Environmental Management

Our Group Environment Policy prescribes that each subsidiary must have an Environmental Management System (EMS), which covers responsibility and control procedures. Twelve of our 27 production units (44%) have chosen certified management systems like ISO 14001 or OHSAS 18001.

To improve our factories' environmental performance even further and minimise risks, the ROCKWOOL Group has developed environmental standards, specifying safety procedures, responsibility and measuring methods. These ROCKWOOL standards may exceed local minimum requirements. For instance, the new ROCKWOOL factory in India makes more air emission measurements than required by local regulations. In 2011 environmental investments totaled EUR 8.6 million. To this figure should be added the considerable investments in material efficiency that have generated both economic payback and environmental improvement.

The individual subsidiaries are responsible for the day-to-day safeguarding of the environment at our factories. The Group central environmental department, headed by our Group Environment Manager, acts as advisor to, and auditor of, the subsidiaries and co-ordinates the corporate environmental policy and strategy. In Group Management, a Division Managing Director is responsible for Group-wide environmental management issues. All factories must set up environmental, health & safety goals, action and investment plans. A quarterly status report is given by the Group Environment Manager to the managing directors and to Group Management. However environmental issues are discussed much more frequently,

								Change
Indicator	2005	2006	2007	2008	2009	2010	2011	2005-2011
CO	100	118	86	52	68	40	43	-57% 🖊
Particles	100	110	78	68	65	67	58	-42% ▼
NO _x	100	72	68	74	74	77	64	-36% 🔻
CO ₂ Scope 1	100	99	94	96	94	89	86	-14% 🔻
SO ₂	100	100	87	103	108	102	90	-10% 🔻
Water	100	91	94	99	90	88	90	-10% 🔻
Waste	100	115	95	114	67	108	96	-4% 🔻
Energy	100	98	99	105	102	97	97	-3% 🔻
Binder	100	102	118	117	110	124	110	+10%
CO ₂ Scope 2	100	95	98	106	111	99	114	+14% 🛖

Eight of ten environmental performance indicators were improved from 2005 (index 100) to 2011. All indicators were calculated per tonne produced stone wool. CO₂ Scope 1 emanates from in-plant sources (e.g. fuels). Other environmental indicators are also related to in-plant consumptions or emissions. Except for CO₂ Scope 2 that emanates from electricity produced off site. Other stages of the lifecycle are dealt with in the Life Cycle Assessments page 10 and in the net carbon footprint pages 10, 11, 22 and 23.



Changing complaints into acknowledgement

After more than 60 passed environment, health & safety inspections, plus five years of improving its dialogue and social engagement in the community, the ROCKWOOL state-of-the-art factory in Croatia finally received its "green stamp" and permanent production permit. Many neighbours who used to be quite critical about the ROCKWOOL factory that was built in their backyard have now been witnessing the company's efforts to respect strict environmental requirements and our involvement in more than 100 active projects within Corporate Social Responsibility in the region. For the year 2011, the local media Labinština.info gave the award "Person of the Year" to the ROCKWOOL representative responsible for our communication and social engagement projects in the community. Transparency and an open approach to our neighbours – as here a class from a local school – are imperative.

as they are strategically important to the Group. The Board of Directors discusses environmental issues on a regular basis as they are intertwined with the Group strategy on energy and $\rm CO_2$ efficiency, development of new solutions and processes, factory expansions and corporate image. The ROCKWOOL Group publishes environmental and social reporting data on an annual basis.

In 2011, 42 external and internal safety, health and environment audits were made. On average, the ROCKWOOL factories are subject to one of such audits at least once a year.

Environmental fines

The ROCKWOOL Group is not involved in environmental litigation. In 2011, two factories received fines from environment, health and safety related authorities, costing the Group EUR 2063. Our Czech factory received a fine for the late reporting, to the authorities, of a fire that was extinguished by our own fire brigade. Any fire must be reported to the authorities immediately. Our Hungarian factory was fined because a faulty heat exchanger caused NO_{x} emission limits to be exceeded. This fault has been remedied.

Community & stakeholder engagement

Being a good, responsible and transparent neighbour is essential for the ROCKWOOL Group and our factories. We seek

to engage in our communities and hold appropriate dialogue. In addition, a number of factories organise "open day" events where our neighbours can see the production facilities, ask questions, air their requests, and hear about our latest plans and their environmental impact. In some locations – like the Clean Air Health Resort area of Flechtingen > in Germany – the perennial "day of open doors" at the ROCKWOOL factory is regarded as day of festivity in the community.

Complaints

In 2011 our 23 reporting factories received a total of 137 complaints from their communities. Air emissions, noise and odour were the three most frequent reasons for complaints. A significant proportion of complaints are related to those factories where a high concentration of people live nearby.

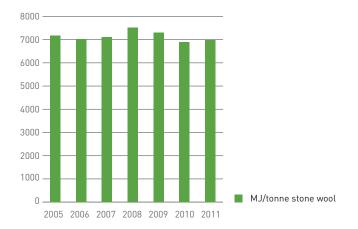
Complaints are registered and dealt with by our environmental organisations at the factories; the reason for the claim is clarified, a response is given to the claimant and remedial action is carried out to the extent possible. We have located the two latest factories built by the ROCKWOOL Group in industrial zones (Russia and India), thereby reducing the potential for neighbourhood issues.

> www.rockwool.com/csr/social/neighbour+relations

Energy efficiency

For a traditional ROCKWOOL loft insulation product, the energy used for its production may constitute less than 1% of its life-cycle energy savings balance. However, energy is a scarce and expensive resource, so we work hard at reducing the amount of energy needed to produce a unit of insulation. With fuel consumption being "the mother of most air pollution", energy efficiency also helps improve important environmental indicators such as climate change, acid rain and smog.

Energy consumption (in factories)



The energy efficiency in our production improved by 3% in 2011 compared to 2005. In 2011 our consumption of energy (fuel & electricity) in our factories reached 7 GJ per tonne stone wool. With an annual production of around two million tonnes this leads to a total consumption of 14 PJ (or 4 TWh).

Important energy and material efficiency projects have been initiated propelling this positive trend. The material efficiency and melting process optimisation projects implemented in 2011 alone are expected to save 66,000 tonnes of $\rm CO_2$ annually.

The melting process whereby, at temperatures above 1500°C, rock and recycled materials are turned into lava and then spun as stone wool fibres, is the most energy-intensive part of the ROCKWOOL Group's production process. The ROCKWOOL Group has some of the world's leading experts in the energy efficient production of stone wool. This is clearly demonstrated when newly acquired factories are modernised with ROCKWOOL know-how. Considerable energy efficiency improvements have been achieved while, at the same time, enhancing product quality and environmental performance.



Within just a year, ROCKWOOL specialists have succeeded in making the newly acquired Russian factory in Troitsk 14% more energy efficient.

Making good use of excess heat

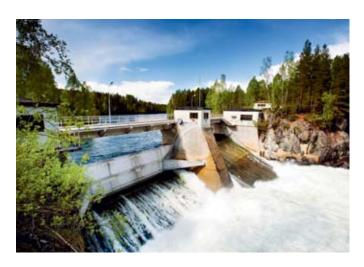
Energy is too valuable a resource to be wasted. In two locations where district heating is prevalent, excess heat from the local ROCKWOOL production process is now supplying valuable energy to help heat the radiators and boilers in thousands of homes around the local community. For instance, an estimated 1.7 million m³ of natural gas and 3800 tonnes of $\rm CO_2$ are being saved every year in Doense, Denmark. This initiative was granted an Environmental Award by the Municipality of Mariagerfjord. Excess heat from a ROCKWOOL factory is also used as district heating in Vamdrup, Denmark. The ROCKWOOL Group would like other communities to engage in similar partnerships, wherever feasible.

Alternative fuels

The typical ROCKWOOL furnace is a coke-fired cupola oven. Burning the fuel directly, where the rock materials need to be smelted, helps reduce transformation losses. This improves efficiency. The ROCKWOOL Group is increasing its use of alternative fuels. Burning a residue material that would otherwise be wasted and landfilled has advantages compared to using traditional fuel materials such as coke. Since 2007 our use of coke alternatives has increased by more than tenfold. The EU Environment Life Programme has supported the ROCKWOOL Group's research in the use of residue raw materials.

Renewable energy

As WWF Clean Energy Ambassador, the ROCKWOOL Group supports the 2050 vision of a society so energy efficient that renewable energy can fulfill all our needs. This also requires huge long-term efforts in our own production processes which, today, rely mostly on fossil fuels. In many countries, renewable power sources need to be developed further.



In 2011, the ROCKWOOL Group's largest factory, in Roermond in the Netherlands, purchased 95 million kWh of electricity from certified renewable sources.

Since 2011, the ROCKWOOL Group's largest production facility, in Roermond in the Netherlands, has bought electricity from renewable sources. This use of renewable energy is increasingly important for Benelux customers committed to sustainability performance as it helps to further improve the Life Cycle Assessment of the products from the factory. In 2011, 95 milllion kWh (95 GWh) of renewable energy were consumed. This is equivalent to the consumption of approximately 31,000 Dutch families. The electricity from renewable sources is CertiQ certified.

Area	Goal	Status	Action
Energy efficiency (in our factories)	Increase the energy efficiency per tonne stone wool by 15% from 2009 to 2015	According to plan. The energy efficiency has improved by 6.3% from 2009 to 2011.	The programmes for improving material efficiency and the melting process will be intensified.

Water efficiency

Water is the fundamental prerequisite for life. In some areas potable water can be a scarce resource and thus a key sustainability factor. About one third of the world's population lives in countries with moderate to high water stress. Climate change will exacerbate drought, not least in the Mediterranean region, where the Group has two factories. In some regions, fast urbanisation or intense irrigation in the agricultural sector can also make potable water an increasingly scarce resource which we, as an industry, must help protect.

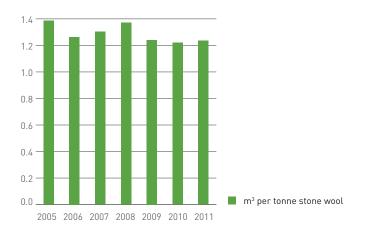
Water efficiency

The Group's water efficiency in our production has been improved by 10% from 2005 to 2011. Consumption is currently approx. 1.2 m³ per tonne stone wool. The ROCKWOOL Group uses water mainly for cooling purposes, for the binder that stabilises the stone wool fibres, and for cleaning and maintenance. In 2011, more than 2 million m³ of water were used. In order to reduce water consumption and to minimise environmental risks, the process water is typically re-used in a closed system. Generally the factories use rain water in order to minimise the usage of potable water. Water resources are not significantly affected by our withdrawal of water in any of our factory locations.

Avoiding emissions to water

The ROCKWOOL Group makes every effort to avoid any uncontrolled discharge. In 2011, no significant spills were

Water consumption (in factories)





Reducing our consumption of potable water, rain water is collected and used as process water in our factory in Spanish Caparroso. Rain water is collected in two basins – One for rain precipitating in unproblematic areas and one for zones that might bring a risk of water contaminants. If there is more rain water than what we can use in the process, then environmental monitoring ensures that no contaminated rainwater is discharged. Instead this impure excess rain water is safely treated.

recorded. Our environmental auditing focuses strongly on preventing ground contamination. In 2008, in Hungary, two cases of ground contamination were detected and mitigation (for instance, using microorganisms and filters) is progressing according to plan. 15 out of 23 factories (65%) use safety drilling to monitor and prevent contamination of ground water resources, while in some of the other factories, best practice procedures for handling storm water are used to protect against contamination.



Minister of the Environment, Ida Auken (to the right), inaugurates the first return system in Denmark to recycle insulation residue from both refurbishments and demolitions. Stone wool residue is now collected at public waste recycling sites and returned to the factory. The ROCKWOOL factory in Doense is seen as a model example of how industry can help achieve the government's Resource Efficiency Strategy.

Recycling and waste handling

The ROCKWOOL Group has been engaged in recycling for more than three decades and today we recycle nearly six times more residue materials from other industries than we deposit ourselves. The 'tamed volcano' of the ROCKWOOL Group's production process is ideal for recycling. The amount of 'upcycled' residue material from other industries has increased to almost 600,000 tonnes per annum. Some 28% of our melt raw materials are recycled content. Inorganic remnants, for instance olivine sand that has been used to sand blast vessels or concrete, and some residues from the metal industry, can substitute for virgin rock. Rock remains an abundant resource, but recycling means less quarrying and less landfill. Further, residue materials from other industries can be used as an energy source substituting virgin fuel such as coke.

Recycling waste

More than EUR 30 million has been invested in recycling plants within the last four years. From 2005 to 2011, the proportion of waste to landfill per production unit decreased by nearly 6%. In 2011, just over 100,000 tonnes of waste were deposited. This is slightly more than in 2005, but also includes a larger number of factories.



See the film "From waste to resource":

> www.rockwool.com/from+waste+to+resource

Return to sender

About 60% of our production companies - including Denmark, Germany, the Netherlands, UK, Poland, Hungary, Croatia, France - are offering 'return schemes' enabling customers to return their ROCKWOOL product offcuts and surplus stone wool from refurbishments. In Denmark one of the factories also takes back ROCKWOOL renovation and demolition waste from building sites. All returned stone wool material is subsequently re-melted and turned into new insulation products. In North America and many European countries, GRODAN horticultural substrates are returned from greenhouses and most of the GRODAN residues are used in the production of bricks.

Return schemes also exist for ROCKFON acoustic ceilings and ROCKWOOL insulation cores for sandwich panels.

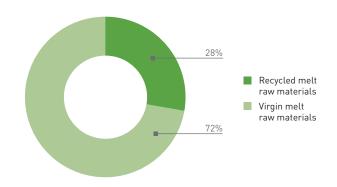
In 2011, nearly 12,000 tonnes of our stone wool waste products were collected from customers and recycled into new products at our plants. This amount can, and will, be increased considerably in future in order to achieve the aim of the EU Waste Framework Directive to recycle at least 70% of construction and demolition waste by 2020 and to provide building projects additional bonus points in some sustainability ratings.

The ROCKWOOL Group is expanding our recycling schemes into more countries where transportation and waste collection systems can be made efficient, and in Denmark and the Netherlands an intensified return scheme is being launched. Depending on local conditions, return of ROCKWOOL residue for recycling helps reduce carbon emissions when transportation distances are below approx. 500 km. In some countries it can also help our customers who would otherwise need to pay landfill tariffs for dumping insulation waste. Near our factory in Wales or in the Danish town of Vamdrup, for instance, it can cost around EUR 100 to deposit just 1 tonne of insulation waste. But in some countries, low landfill tariffs mean customers may be slower to embrace our ability to take back their stone wool remnants.

In France, the Netherlands and in Canada, return schemes for wooden pallets have also been established. In 2011, more than 20,000 units were recycled to our factory in France. The innovative introduction of ROCKWOOL insulation as palleting

ROCKWOOL recycling balance We recycle nearly six times more residue materials from other industries than we deposit ourselves Recycling -1 +6 Stone wool waste to disposal sites Recycling of secondary raw materials Source: Group environment department

Increased recycled content



On average 28% of the melt raw materials are from recycled sources. But at our Danish factory in Doense, recycled content constitutes more than 75% of the melt raw materials.

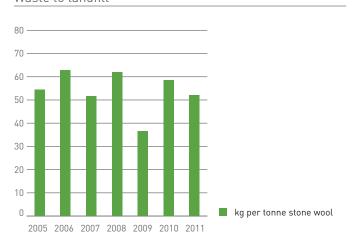
for roofing boards resulted in an environmental award to the Danish ROCKWOOL company some years back.

At our factories, plastic packaging waste is typically collected and recycled externally. In many countries, plastic waste – including packaging for insulation – is also collected at building sites for recycling or incineration with heat recovery.

Hazardous waste

In 2011, the ROCKWOOL Group disposed of approx. 6000 tonnes of hazardous waste. This corresponds to approx. 6% of the total amount of waste. Typical types of hazardous waste are stone wool residue with "wet" (uncured) binder and a few types of fly ash that cannot be recycled.

Waste to landfill



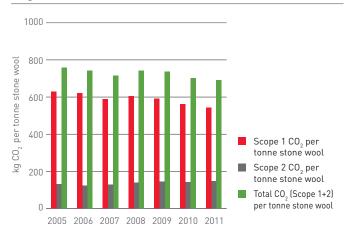


CO₂ efficiency

Scope 1: CO_2 from fuel combusted at the company Scope 2: CO_2 from power supply companies Scope 3: CO_2 from product use, waste disposal, air travel, vehicles not owned by the company, production and transport of raw materials, and other indirect emissions.

For a traditional ROCKWOOL loft insulation product, the CO_2 that was emitted during its production and other stages of its life-cycle may constitute less than 1% of the CO_2 it saves as insulation in a building. For insulation for hot industrial processes it is even less, typically just around 0.05%. But although ROCKWOOL insulation has an extremely positive net carbon footprint, the stone wool production at our factories also requires more than 1.4 million tonnes of Scope 1 (CO_2 emitted in production) and Scope 2 CO_2 emissions (emitted at power supply plants). The ROCKWOOL Group aims at both improving the positive CO_2 reduction qualities of our insulation products (Scope 3: after the products leave the factory) and at minimising our own (Scope 1 & 2) CO_2 emissions.





Overall CO, efficiency in our production

In 2011, the ROCKWOOL Group's factories recorded Scope 1 ${\rm CO_2}$ emissions (generated from production) of 1.1 million tonnes. Scope 1 ${\rm CO_2}$ efficiency improved by nearly 14% over 2005. This improvement is due to the Group's programmes to boost material efficiency, to optimise our melting process and our emission reduction activities that have minimised emis-

sion intensity and compensated for a large proportion of our sales growth, which inherently means an increase in our absolute CO_2 emissions.

The Group's Scope 2 CO₂ emissions (generated from our consumption of electricity produced off site) reached 308,000 tonnes, representing what could seem to be a decrease in CO₂ efficiency of 14%. This negative trend is almost exclusively attributable to the change in the national averages of the latest Green House Gas (GHG) Protocol for CO2 intensity figures of power supplies. In short: the electricity suppliers use more CO2 intensive production methods on average, whereas the ROCKWOOL Group's own electricity consumption per production unit increased by 1%. This small increase is, inter alia, due to the introduction of more advanced production equipment (requiring electricity of our factories). As part of the Group's goal to improve the energy efficiency at our factories by 15% from 2009 to 2015, intensified monitoring and improvement of the electricity consuming parts of our production process will be rolled out to more factories over the coming years.

Our combined Scope 1+2 $\rm CO_2$ emissions efficiency improved by nearly 9% from 2005 to 2011. The higher level of absolute $\rm CO_2$ emissions over last year (just over 115,000 tonnes for Scopes 1+2) has been a prerequisite for benefitting the climate, because it reflects an even stronger increase in insulation sales volume. These much larger $\rm CO_2$ savings (during the use of the insulation in buildings and industries, in Scope 3) will improve our already positive net carbon footprint.

CO, allowances

 ${\rm CO_2}$ allowances are an increasing motivator for our major industry clients to improve the insulation of hot processes and to a lesser extent for the building sector. As a major production company, the ROCKWOOL Group is also under the EU ${\rm CO_2}$ allowances scheme.

Up until ultimo 2012, the ROCKWOOL Group expects that the 11 facilities covered by the EU Emissions Trading Scheme (ETS) will have been allocated sufficient allowances to cover their emissions.

From primo 2013, the ROCKWOOL Groups 16 facilities covered by – or harmonised to - EU ETS will progressively receive a deficit of allowances compared to actual emissions. The ROCKWOOL Group plans to address this future allowance deficit by intensifying our focus on improving CO_2 efficiencies in production.

Read more in the Rockwool International CDP report which is in the Nordic Carbon Disclosure Leadership Index and with 93 points has Denmark's second highest rating > www.cdproject.net

Area	Goal	Status	Action
CO ₂ efficiency (scope 1)	Increase the CO ₂ efficiency per tonne stone wool by 15% from 2009 to 2015	Slightly ahead of plan. The CO ₂ efficiency has improved by 8.6% from 2009 to 2011	The programmes for improving material efficiency and the melting process will be intensified.
CO ₂ net carbon footprint (scopes 1+2+3)	Increase our positive net carbon mitigation footprint (scopes $1+2+3$). From 4000 million tonnes CO_2 lifetime savings by the insulation produced in 2009 to 7600 Mt CO_2 by the insulation produced in 2020.	Slightly ahead of plan. The insulation produced in 2011 will, in its lifetime, save an estimated 4736 million tonnes of CO ₂ . Since 2009, a main driver has been investment in additional production capacity in emerging markets - China, India, Russia, Thailand and Malaysia.	The Group will continue to transfer our CO ₂ mitigation solutions to more countries in need of buildings and industrial process insulation. Further, we will improve the CO ₂ performance of our products and solutions and continue to seek CO ₂ efficiency improvements in our own production.

Air quality

By reducing the need to burn fossil fuel, ROCKWOOL insulation also reduces overall air pollution - smog, acid rain and eutrophication (an excess of nutrients that may disturb the bio-diversity in soil and water). A traditional ROCKWOOL loft insulation product saves 61-162 times more of these air pollutants than were emitted during its production. Reducing air pollution is a vital co-benefit of insulation for many regulators, not least in cities where solid fuel is frequently used.

Abatement technology

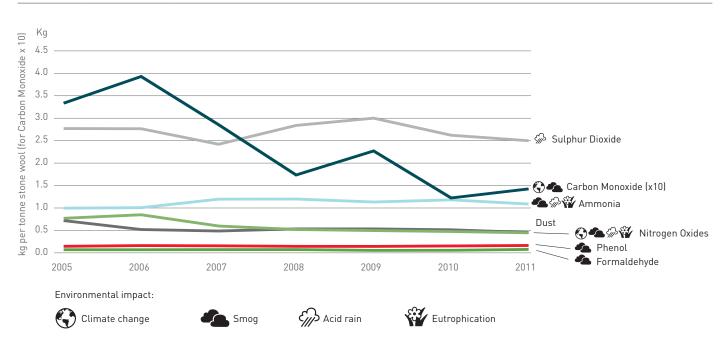
The ROCKWOOL Group's factories use after-burners and other environmental equipment to minimise our own emissions such as carbon monoxide (CO) from the melting process, and phenol and formaldehyde from the small amounts of binder used to stabilise stone wool fibres. The combustion of carbon monoxide also improves energy utilisation. At temperatures exceeding 700°C, most of the airborne organic remnants from the production process are burnt off.

Further, ROCKWOOL stone wool production plants use filters to retain dust. Emissions of fine particles (PM) have thus been reduced by 62% per production unit from 2005 to 2011.

Smog

The development of smog precursors in the Group's emissions shows a mixed picture. Carbon monoxide emissions per tonne stone wool have been reduced by 57% from 2005 to 2011. This improvement is attributable to the vast majority of active production lines now having environmental equipment burning off CO and other organic remnants from the melting process. Also nitrogen oxides have been reduced by 56% per tonne stone wool. Pulling in the other direction is the 10% increase in the Group's emissions of binder components.

Emissions (from factories)





Every year thousands of people perish prematurely due to air pollution. According to the Danish Meteorological Institute (DMI) and Ecofys, better insulation of buildings to lowenergy requirements can help reduce air pollution from fuel combustion. "Emission reductions of up to 9% in particulate matter and 6.3% for sulphur dioxide were found in northwestern Furone"

Bio-diversity and eutrophication

Emissions of nutrients can boost the growth of algae and also disturb the bio-diversity in soil. The Group recorded an approx. 10% increase in ammonia. But a considerable drop in emissions of nitrogen oxides was also achieved.

Less acid rain

Despite recycling increasing the emissions of sulphur compounds from the cement used to keep the recycled briquettes together, the Group has nevertheless managed to reduce our ${\rm SO}_2$ emissions per tonne stone wool by 10% since 2005. With nitrogen oxide concentration more than halved, the Group's collated emissions of acid rain components decreased.

With SO_2 being a precursor for particle formation, a decrease in SO_2 emissions helps improve air quality and also reduces the plume from our furnaces.

Ozone depletion

ROCKWOOL insulation does not contain any ozone depleting blowing agents. What insulates is simply nature's air trapped between the stone wool fibres. In our production facilities, no significant use of ozone depleting substances is needed. It is limited to the small amounts used in special cooling or fire extinguishing devices where certain fire safety requirements prevail.

People

People's health, safety and quality of life are essential in what we do. With care for our employees and neighbours, we are committed to making products that provide durable, safe, reliable and beneficial solutions for our customers and other stakeholders. The solutions we create allow our customers to improve the performance of buildings and installations in terms of comfort, energy savings, fire safety, acoustic properties, visual appeal, resource use or structural robustness. The dividends of our largest shareholder, the ROCKWOOL Foundation, are financing research and social projects to benefit society.

From the 3 P's of sustainability in the ROCKWOOL Group > www.rockwool.com



Social aspects

The ROCKWOOL Way

The ROCKWOOL Group is a value based company with a strong heritage and culture. Our values 1> of honesty, responsibility, efficiency, passion and entrepreneurship form a strong foundation for the way we work together internally, as well as with all our external stakeholders. Our Principles of Leadership and drive for trust and empowerment are actively promoted on all management levels.

The Group maintains an open dialogue with our stakeholders. This dialogue is crucial in order to identify if we are perceived in the positive way in which we always endeavour to conduct our business, and would want our company and ourselves as individuals to be perceived.

Policy and principles

The Corporate Social Responsibility approach of the ROCKWOOL Group reflects our desire to contribute positively both to the social development of society – and also to the individuals health and well-being, as stated in the Group's Social Charter ²>. We carry out our business according to modern standards for responsible and reliable business conduct.

Securing conformance

The managing director of each company in the ROCKWOOL Group is responsible for his company conforming to Group policies – including its abidance with human rights as defined by the United Nations. Compliance with basic human and labour rights is incorporated in the ROCKWOOL Group's risk management system. This means that each operating company is asked yearly to assess and quantify the risk and describe initiatives to mitigate the risk.

A set of policies and manuals, plus the Group's Principles of Leadership, help provide guidance for how to secure conformance. Training – either in the local company or at the Group's ROCKWOOL University – helps employees navigate through dilemmas. The fulfillment of Group values and social principles are regularly evaluated in bilateral conversations (typically on a monthly basis), as well as in the annual performance reviews, between all managers and those reporting to them. Any misconduct on either part must be addressed and corrective action must be taken.

It is the responsibility of our Chief Financial Officer to coordinate the development of Group policies and monitor conformance. The ROCKWOOL Group has an Audit function which ensures the necessary reporting and documentation of conformance. On average the function audits each subsidiary every two years, but occasionally more frequently if the risk profile makes it prudent. If a violation of Group policies – such as human rights – were to be encountered, then the issue may also be addressed in the Audit Committee of the Board of Directors of ROCKWOOL International A/S.

Human rights

The ROCKWOOL Group supports the international human rights principles and standards for labour as defined by the United Nations. This implies minimum standards for freedom of association, non-discrimination, working hours, salary and benefits, disciplinary measures, child labour and forced labour. We report annually on our social performance. Our CSR progress report ³> and our website provide further details.

The ROCKWOOL Group has not been compromised in 2011 by any case or relationship questioning the company's conformity with the internationally recognised human rights defined by the United Nations. The Group has neither received any significant fines, nor any significant non-monetary sanctions, for non-compliance with social laws and regulations. No operations have been identified as having a risk for incidents of child labour, forced or compulsory labour.

Non-discrimination and diversity

The Group is against any kind of discrimination due to age, gender, race, religion etc., and actively aims to strengthen internal diversity in these areas. Any incident of discrimination, and action taken against it, must be reported to the management responsible. In 2011, no incidents of discrimination were filed

- 1 > www.rockwool.com/mission+and+values
- ² > www.rockwool.com/social+charter
- 3 > www.rockwool.com/csr+reports



ROCKWOOL Croatia has more than 100 active CSR projects in the community. One of them being prestigious scholarships to, so far, 37 talented and hardworking students and pupils from the community. Caring for the education of our youth is one of the best investments we can make in our society.

The construction industry has more male than female employees. We very much welcome a higher degree of diversity. Two out of ten members of the Board of Directors are female and in ROCKWOOL Group management one of seven members are female. In most countries there is still room for a higher proportion of women in key positions. In Russia, however, the majority of the management team members are women. However the ambition for increased diversity is going far beyond the gender dimension. An increasingly international and complex business model requires multicultural and multifunctional expertise.

Labour standards

For decades it has been a cornerstone of the ROCKWOOL Group's policy to provide good and safe working conditions, and room for personal and professional development for our employees, many of whom have shown long-term loyalty to the company. The ROCKWOOL Group employs more than 9,400 people.

Unions

The ROCKWOOL Group acknowledges that it is everyone's right to join trade unions for the protection of his or her in-

terests. The ROCKWOOL Group tends to have constructive working relations with the unions and it also hosts a European Forum where employee representatives from major operating companies in Europe are in regular dialogue with representatives from Group management on strategic issues of a cross border nature. The Group has not identified any operations in which the right to exercise freedom of association and collective bargaining is at risk.

Retaining skillful colleagues

In 2011, the employee turnover rate was 4.4% (2010: 4.2%) for office staff. In general, the ROCKWOOL Group tends to be a popular workplace. Absenteeism was 3.3% for production staff (2010: 3.5%). For office staff it decreased from 2% to 1.8% (2010 vs. 2011).

Our bi-annual Group Employee Perception Survey acts as an important barometer for how we are living up to the expectations of our employees. In 2011 the response rate was 89%. In general employee engagement is very high already today, but we are committed to continuous improvement in a constantly changing environment.

Training and development

The ROCKWOOL Group offers a wide range of career opportunities, including international projects. We actively promote rotation across organisations, functions and geographies. A strong sense of a common goal and shared culture with increasing interaction with colleagues around the world fosters personal and professional growth.

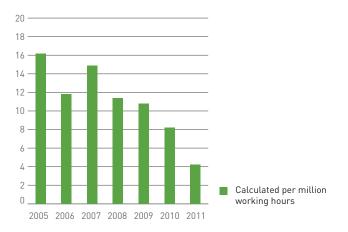
Providing training for the continued personal and professional development of our employees has, for decades, been part of the ROCKWOOL Group's HR practices. In 2011, the average number of training days for office staff was 3.2% (2010: 3.3%). For production staff it increased to 3.1% from 2.4%. As an example, the ROCKWOOL University launched its Sales Excellence activities, cultivating a new sales approach towards architects and consulting engineers. By the end of 2011, 16% of our total sales force had completed the training and the 2012 goal should see more than 60% pass the course.

With the ROCKWOOL Group expanding into a growing number of countries and embracing a higher degree of cultural and socio-economic diversity among our employees, there is also an increasing need to expand the training in leadership as well as human rights and social principles which, today, is one of many integrated elements in our general employee training.

Workplace safety

In 2011, the ROCKWOOL Group achieved an all-time low in the frequency of accidents (F.R.A.). From 2005 to 2011 the frequency has been reduced by 74% to 4.2 accidents per million working hours. The 2012 goal of a F.R.A. of maximum five was thus achieved one year in advance. Six factories achieved zero accidents. The frequency of lost work hours due to accidents was reduced to 0.7 per thousand work hours. Very tragically, there was a fatal accident in both 2011 and 2012. In 2011, one of our colleagues who was working on a short-term contract died at our newly acquired factory in China. In 2012, at our Russian factory which had not had a lost-time accident for

Frequency of accidents



more than four years, a colleague was involved in a fatal accident when doing maintenance service of the conveyor. Fatal accidents are unacceptable. We are making every effort possible to prevent any such accident happening again.

All operating companies have an occupational Health & Safety Officer, leading the safety committees. In 2011, 204 safety committee meetings were held. International cross-fertilisation of best practice takes place at face-to-face meetings once a year and at Live Meetings on a quarterly basis. Two factories have a Health & Safety certified site in accordance with OHSAS 18001.

Every accident is one too many, so the ROCKWOOL Group has set itself a new target for 2017 of maximum two accidents per million working hours. The intensified "One Group – one safety!" campaign will help keep up momentum in the drive towards zero accidents.

Suppliers

The ROCKWOOL Group wants suppliers who are environmentally and socially responsible. All new raw materials suppliers under contract with the Group Sourcing & Procurement func-

Area	Goal	Status	Action
Workplace safety	A 'best-in-class' goal of maximum 2 accidents per million work hours before 2017.	In 2011: historically low frequency of accidents of 4.2 achieved – against a 2012 goal of max. 5.	Strengthen the campaign "One Group – one safety!" and thus raise employees' risk aware- ness even further.



tion are asked to sign a declaration to the Code of Conduct for Suppliers for the ROCKWOOL Group including a commitment to comply with the UN Universal Declaration of Human Rights, and international environmental and quality (e.g. ISO) certifications.

Our Managing Director for Group Sourcing & Procurement reports to the CFO. After doing a desk evaluation of criticality covering all 900 raw materials suppliers (using geography, category, spend and ISO (or similar) certification as criteria), Group Sourcing & Procurement has identified 140 suppliers with a need of further investigation. The spend with the 140 suppliers was EUR 317 million out of a total spend of EUR 410 million (thus covering more than 75%). As of 1 October 2012, 48 suppliers have initially been deemed not to meet the Group standards. However this number will decrease as issues are clarified and settled. Group Sourcing & Procurement – assisted by Group Auditing – is now in the process of auditing all those 48 suppliers in order to eradicate any non-conformity issues that may remain.

Community engagement

The ROCKWOOL Group wants our companies to make a strong local commitment, supporting CSR activities in the community.

These initiatives range from co-funding activities for vulnerable people, young talent or for environmental improvements, to initiatives that strengthen social cohesion in the community. Important efforts are also made to train future generations, and to include people with special needs in the labour market.

In 2011, approx. 23% of the dividends from ROCKWOOL International A/S (corresponding to more than EUR 6 million) were paid to the ROCKWOOL Foundation which funds benevolent capacity-building projects and socio-economic research (see page 8). In 2011, the ROCKWOOL Group paid approx. EUR 37 million in taxes. To this sum can be added taxes from ROCKWOOL employees and local sub-suppliers.

Award

In 2012, the Polish ROCKWOOL company won a CSR award, among other achievements, for its promotion of equal opportunities for women and men. The 'Firma Dobrze Widziana' award was given by the Polish Business Centre Club and is co-financed by the European Social Fund's Human Capital Operational Programme.



The ROCKWOOL Group is one of the world's leading CO_2 mitigating companies. The ROCKWOOL Group is the second largest insulation producer in the world, and the No.1 company within the challenging stone wool fire safety markets. Insulation is one of the important industrial products to have a positive net carbon footprint. A traditional ROCKWOOL product for loft insulation will, in its lifetime, save a hundredfold the energy and CO_2 needed for its production as compared to an uninsulated construction. The CO_2 reductions are even higher for insulation of hot industrial processes, for instance in power plants, petro-chemical industries and other hot industrial processes, where temperatures can exceed 200, 400 or even 600 degrees Celcius. On average, ROCKWOOL insulation for industrial processes and technical installations will save 20,000 times more CO_2 than was needed for its manufacture. In total,

the ROCKWOOL insulation produced this year will, in its lifetime, save more than 4000 million tonnes of CO_2 [4 $GtCO_2$] in buildings and industrial processes worldwide.

ROCKWOOL stone wool helps improve the quality of life for millions of people around the world. It provides a more comfortable indoor environment both in cold and hot climates. It ensures lower energy bills, absorbs noise, and provides vital fire protection. By reducing the need to burn fuel, it also reduces many air pollutants.

The ROCKWOOL Group has 27 factories in 17 countries across Europe, North America and Asia. It employs some 9400 people and had a turnover of EUR 1.845 billion in 2011. Its largest shareholder is the benevolent ROCKWOOL Foundation.

Read more:

This publication is an excerpt of many ROCKWOOL Group initiatives within Corporate Social Responsibility (CSR), sustainable development, and Environment, Social & Governance (ESG).

Read more on

Social Charter: www.rockwool.com/social+charter CSR progress report: www.rockwool.com/csr+reports Annual Report: www.rockwool.com/annual+reports

www.rockwool.com www.rockwoolfoundation.com



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