ABB Group Sustainability Report 2002

Published June 2003

Economic

Environmental

Social

Contents (operational review)

Global Reporting Initiative (GRI) reporting section

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ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 135,000 people.

The triple bottom line: Global Reporting Initiative (GRI)

In producing this report, ABB has tried to converge on the latest version of the guidelines of the Global Reporting Initiative (www.globalreporting.org), published in June 2002, using the recommendations that are relevant to ABB's activities. The GRI's voluntary guidelines are used by organizations to report on economic, environmental and social dimensions of their activities, products and services.

The first part of this report is devoted to case stories which highlight ABB's pursuit of sustainable development; the second section tries to follow as closely as possible the information and indicators contained in the GRI guidelines.

ABB's Sustainability Report is available in English, German, French and Swedish and also on the Internet: www.abb.com/sustainability

Highlights of 2002

Economic

- ABB develops sustainability business plans for implementation in 50 countries during 2003 to support its objective of integrating sustainability into all business practices at country level
- ABB extends its Industrial IT family of products with "Sustain IT," "Value IT," and other protocols which introduce sustainability performance criteria into control systems supplied to clients
- ABB pioneers an eco-efficient way of bringing electrical power to offshore oil and gas platforms with subsea high-voltage direct current (HVDC) links. ABB "Motorformer" motors drive platform pumps and compressors
- Despite challenges in 2002, ABB ranks second in its industry group in the Dow Jones Sustainability Index

Environmental

- ABB extends its environmental management program for manufacturing and service sites to all remaining employees in non-manufacturing facilities – beginning with the group's Zurich headquarters
- ABB steps in to rehabilitate sites and equipment contaminated with toxic polychlorinated biphenyls (PCB) in war-damaged Serbia
- The three-year China Energy Technology Program – sponsored and led by ABB – is formally concluded and its results handed over to stakeholders at a ceremony in Beijing
- ABB develops new capacitors for high-voltage direct current (HVDC) applications which store twice the energy in half the space, and weigh 80 percent less than the units they replace

Social

- ABB actively participates in the United Nations Global Compact Steering Group on actions in Least Developed Countries (LDCs), and pledges to assume long-term responsibility of UNGC activities in Senegal
- At the United Nations World Summit on Sustainable Development in Johannesburg, ABB launches its common effort initiative "Access to Electricity" to encourage sustainable development in poor communities, evaluating projects in Tanzania and Senegal
- A new health and safety management system based on OHSAS 18001and the International Labour Organization guidelines is developed and launched throughout the group

100

man-years of effort drive the sustainability management program each year

475

manufacturing sites have implemented ISO 14001

20,000

reconditioned personal computers are donated by ABB to disadvantaged communities in South Africa

Sustainability is a key component of our business strategy

"ABB provides utilities and industry with power and automation technologies which simultaneously improve performance and reduce environmental impact. This raises profitability and quality of life – economically, environmentally and socially."

Jürgen Dormann,
Chairman and CEO, ABB Ltd

Economic performance comes first

The year 2002 will go down in ABB's books as difficult, but we made considerable progress while striving to return to profitability.

Despite a net loss, flat markets, and the lingering asbestos issue, we showed that focusing on our core power and automation technologies businesses is the right path to a sustainable recovery.

ABB has skilled and dedicated people, and excellent products and services. We employ around 135,000 people in about 100 countries. To bolster our leading technology positions, we invested around 4.5 percent of revenues, or US$ 799 million, in research and order-related development in 2002.

We do not expect market improvements in the short term. Consequently, we are working to further simplify our organization and reduce costs.

In 2002, we took several steps to improve the group's operational performance. The Step change business improvement program, launched in October 2002, is aimed at lowering our cost base by four percent of revenues within 18 months, cutting costs by US$ 800 million by mid-2004.

The move to concentrate on two core divisions, Power Technologies (see page 7) and Automation Technologies (see page 7), is central to the business improvement program.

The focus on core divisions is leading to a reduction in employees (see pages 22–23). Divestments scheduled for this year should transfer around 30,000 people to other companies; and the Step change program will cut around 10,000 – 12,000 positions from the ABB Group. We expect there will be fewer than 100,000 employees working for ABB by mid-2004.

While it is crucial to reduce our cost base to remain competitive, we will not let our leading position in social and environmental performance slip.

Economic (page 40), environmental (pages 41–44) and social (pages 45–48) performance are all important.

Of course, a solid economic bottom line allows us to improve our overall sustainability performance.

Creating transparency

ABB's social policy sets out a high standard of business ethics for all our people.

We have introduced new charters that provide clear mechanisms to ensure corporate governance (see page 33). We encourage openness and transparency throughout the company and with external stakeholders.

We create business opportunities and gain a competitive edge by offering products and services with superior sustainability performance.

We have taken an important step forward in protecting the health and safety of our employees, by introducing new procedures to the latest international standards, and focusing on the elimination of serious accidents.

As a supplier of electrical, transmission and distribution equipment, and control and process automation products and systems for utilities and industry, ABB pioneered environmental product declarations. This process looks at the entire life cycle of a product when describing and quantifying its environmental performance.

This helps our designers improve eco-efficiency, and helps our customers choose equipment that reduces costs, as well as environmental and social impact.

Talking to stakeholders

Last year, we identified three major issues for ABB in the course of stakeholder dialogues – occupational health and safety (see pages 24–25), sustainability performance of suppliers (see page 20), and equal opportunity.

We have taken action to address the first two, and are investigating options for the third.

Electrifying the world

ABB is mobilizing its power and automation technologies in common efforts to help reduce poverty. At the World Summit on Sustainable Development in Johannesburg last summer, ABB launched its "Access to Electricity" initiative (see pages 26–27).

With partners, we want to provide conditions for the sustainable development of poor communities and explore new business models for rural electrification.

We are focusing on Tanzania and Senegal, where ABB has pledged to support efforts to implement the United Nations Global Compact locally.

The business case for sustainability

Throughout ABB, we embed sustainability management, concepts and tools into the strategies, processes and day-to-day business, so they visibly translate into an improvement of our financial bottom line.

That is our challenge and commitment.

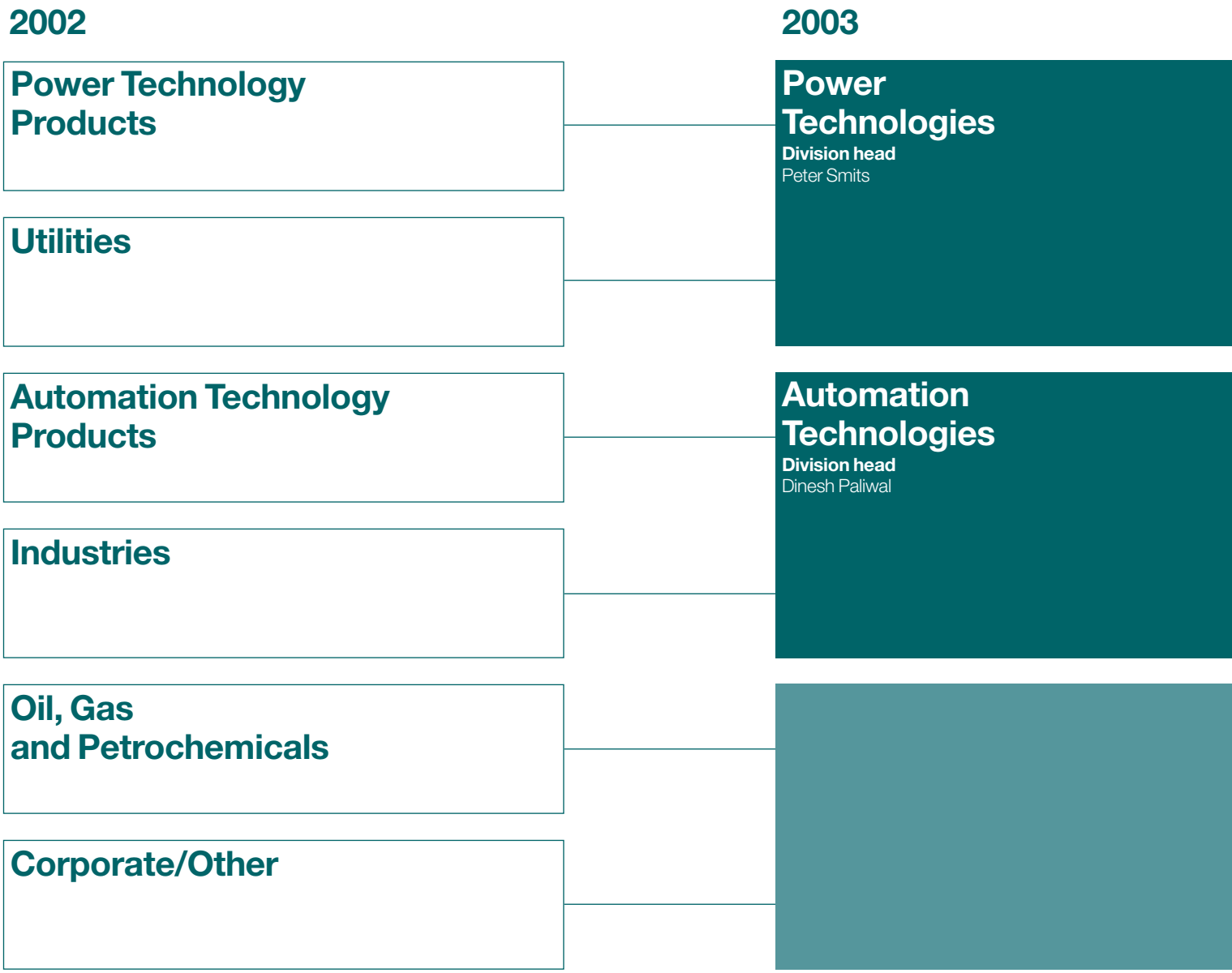
Jürgen Dormann,
Chairman and CEO, ABB Ltd

ABB's sustainability objectives

- Improve economic performance
- Extend environmental management to all employees
- Continuously improve the eco-efficiency of all products
- Implement social policy worldwide
- Implement latest occupational health and safety standards
- Help reduce poverty through Access to Electricity
- Raise awareness within ABB that sustainability matters

To find out more visit www.abb.com/sustainability

In 2002 ABB streamlined its divisional structure



Two new core divisions were created. Power Technologies, which combines the former Power Technology Products and Utilities divisions, and Automation Technologies, which combines the former Automation Technology Products and Industries divisions.

The Oil, Gas and Petrochemicals division, which we intend to divest, qualified for discontinued operations. The performance of this division and the other discontinued operations does not contribute to ABB's revenues and earnings before interest and taxes (EBIT) but is used in the calculation of net income.

Business areas
- Power Systems
- Utility Automation Systems
- High-Voltage Products
- Medium-Voltage Products
- Power Transformers
- Distribution Transformers

Description
ABB Power Technologies serves electric, gas and water utilities, as well as industrial and commercial customers, with a broad range of products, systems and services for power transmission, distribution and power plant automation.

Business areas
- Control Platform and Enterprise Products
- Drives and Motors
- Low-Voltage Products and Instrumentation
- Robotics, Automotive and Manufacturing
- Paper, Minerals, Marine and Turbocharging
- Petroleum, Chemicals and Consumer

Description
ABB Automation Technologies blends a robust product, system and service portfolio with end-user expertise and global presence to deliver solutions for control, motion, protection, and plant optimization across the full range of process, discrete and utility industries.

Discontinued operations
- Oil, Gas and Petrochemicals
- Structured Finance
- Combustion Engineering
- Other divested businesses

Non-core activities
- Equity Ventures
- Remaining Structured Finance
- Insurance
- Building Systems
- Other activities (mainly Group Processes and New Ventures)

Corporate
- Headquarters/Stewardship
- R&D
- Other (includes consolidation, real estate and Treasury Services)

Sharpening our competitive edge

Like many other companies, ABB started out on the road to sustainability by first raising its environmental performance – focusing on its sites, products and projects. We then addressed our social performance, introducing a policy, guidelines and indicators to measure performance.

With the publication of our second triple-bottom-line sustainability report, we introduce key elements of our economic performance alongside our environmental and social performance, which brings into focus the business case for sustainability.

Sustainability must be an integral part of our strategic planning, product designs and management tools, to impact fully the performance of our two core power and automation technologies divisions. Developing a convincing business case, which gives us a competitive edge, underpins our future ambitions, attracts young people and helps us build a motivated and talented workforce – the real asset of a progressive company.

The elements

Sustainability improves our financial position and strengthens sales in the following ways:

- **Reduces environmental, social and financial risks** through legal compliance, ISO 14001 implementation, due diligence, identifying environmental, social and business continuity risks and liabilities, meeting customers' expectations
- **Enhances relations with investors and creditors** through reduced risk exposure, high sustainability management performance, increasing ABB's appeal to socially responsible investors
- **Preserves ABB's license to operate** through high business ethics, proper handling of controversial projects, improved corporate governance and transparency
- **Creates opportunities and enhances competitive advantage** through reduced manufacturing costs, fewer lost hours, eco-efficient products, mitigating customers' problems, boosting ABB's "supplier of choice" appeal to customers and partners, pre-qualification for difficult projects
- **Contributes to innovation and product development** through a "life-cycle perspective" in innovation, environmental product declarations to improve design and gain competitive edge, identifying sustainability trends and customers' future needs
- **Supports our brand and enhances communication** through high sustainability rankings, motivated employees, new sales arguments, high-quality sustainability reports and Web sites
- **Helps ABB respond to stakeholder demands** through stakeholder dialogues, sustainable solutions, common initiatives, corporate transparency, high health and safety standards
- **Acting as an antenna to detect tomorrow's business conditions** through monitoring new regulations and coordinating ABB's responses, detecting upcoming threats and opportunities, monitoring civil society demands, promoting new sustainable solutions, benchmarking

Power Technologies

Daring to be different
ABB has developed a new line of power technology products which are virtually oil-free and made from non-flammable materials.

Dry-type high-voltage capacitors and dry-type high-voltage cables, used to transmit and distribute power from one location to another, are safer to use and easier to dispose of, according to industry experts. To enhance performance, ABB developed more efficient IGBT semiconductors.

To see the full impact of these new technologies, take the example of heavy industry. Large and rapidly changing loads, such as an electric furnace in a steel mill, cause significant disturbances in the power supply that both reduce the efficiency in the furnace and disturb other electricity users. The traditional way to solve this was to use more and bigger power lines for the loads or to locate power plants close to the loads.

With static var compensation (SVC) light, it is possible to increase the efficiency of the smelting process and reduce the overall demand on the supply network.

The output from the steel plants per kilowatt of energy used has been increased, yet the number of power lines or local power plants has been reduced.

Power transmission is usually associated with unsightly overhead transmission lines and worrying electromagnetic fields. ABB has developed a new generation of transmission systems based on underground or subsea transmission called HVDC Light. The system is based on a balanced dual cable system, which almost eliminates electromagnetic fields. The system makes long distance underground power transmission viable and offers a capability similar to SVC Light for network improvement. We can then combine power transmission with power quality enhancement. A transmission system in Australia, based on this technology, recently won a major environmental award (see page 14).

Eco-efficient products
Gas-insulated switchgear
HVDC power links
Compact substations
Energy management systems

To find out more visit
www.abb.com/ptp

Automation Technologies

Recycling old variable speed drives
ABB delivers more than 200,000 variable speed drives (VSDs) every year to customers worldwide, of which a quarter are replacements. This means some 50,000 obsolete drives are scrapped every year.

In the European Union it is now illegal to dispose of such typical electronic products in landfill sites at the end of their useful life, since they are classified as hazardous waste due to the metals and substances they contain.

ABB in Finland started an initiative several years ago to “take back” obsolete VSDs and electric motors, supplied by ABB and competitors, for recycling.

“Earlier we dismantled old VSDs by ourselves, sending the parts for recycling. Now we include this responsibility in our service contracts and the time is freed for more productive work and the working environment is now cleaner,” says Petri Salo, maintenance manager of Stora Enso’s Varkaus mill.

The products are collected and delivered to a special recycling center, which belongs to the “Reuse and recycling European Union Social Enterprises, RRUSE” network and is partly financed by the European Social Fund.

Products are taken apart, and items such as copper, aluminum, steel, plastics and printed circuit boards are sent on for further specialist recovery. About 90 percent of materials (by weight) can be recycled, which covers about 50 percent of the costs involved. But these costs are lower than the taxes that would be levied for landfill disposal – now no longer permitted. “ABB’s take back program is a godsend. We didn’t know what to do with old VSDs,” says instrumentation engineer Seppo Heikinheimo of Turku Water.

Eco-efficient products
Azipod marine propulsion
Motors (Motorformer) and drives
Turbochargers
Robotics
Instrumentation and control

To find out more visit
www.abb.com/atp

Helping economies develop

Sustainability has a major impact on our economic performance whether through strategic planning or the products and systems we deliver. It also is a central factor in the commercial and social contracts we undertake with customers and partners.

To find out more visit the economic section on www.abb.com/sustainability

Highlights

- Restoring light to Kabul's streets
- A smart device provides affordable electricity to poor people in Argentina
- ABB helps educate hundreds of poor children in Brazil
- PCB clean-up in Serbia
- 20,000 used PCs donated to schools in South Africa
- ABB in India upgrades Syria's transmission network

ABB in conflict zones – Afghanistan

Any city dweller experiencing power failure at night instantly appreciates the safety and security that street lighting brings.

So try to imagine life in Kabul, the capital of war-torn Afghanistan, where residents lived without street lights for more than a decade until ABB accepted a project to supply 1,200 new light standards in the city's most important streets and squares.

"We are delighted to be able to help the people of Kabul in such a practical way," says Joachim Schneider, from ABB's Power Technologies division. "Anyone who has experienced a power failure in the city knows that light means one thing more than anything else: greater security."

The Afghan government is busy reconstructing the country's demolished infrastructure. Safe streets are a priority, along with schools and hospitals, drinking water, transportation networks and reliable electrical power.

The street lighting project, awarded in early 2002 and finished by late summer, involved ABB companies in Pakistan and Germany. It was financed by the German government, which is traditionally one of the leading donors to Afghanistan.

Turning the street lights back on in Kabul rekindles a small but welcome sense of normality in a war-weary land. And as people walk or drive more safely at night, it's also another step on the road to renewed business development and employment.

A simple ABB device prevents energy theft and dangerous clandestine electrical connections.

Eliminating energy theft while helping the poor

Energy theft is a major problem that deprives utilities of revenues, and leads to network overload, voltage drops and power cuts that impair power quality for paying customers.

In addition to reducing the life of network equipment, stealing power is extremely hazardous both for the people who do it and those who live near clandestine connections. The theft usually involves no more than a cable strung up to the nearest overhead line.

Electrocution occurs sometimes, and the risk of bad connections causing a fire that spreads through shantytown communities is real.

ABB has responded to this problem with a snap-on, tamper-proof current limiter that is inexpensive and easy for utilities to install, and guarantees poor households a limited but adequate amount of electricity at a fixed, affordable price.

For about US$ 5 a month, a household gets enough electricity to power a fridge, five incandescent lamps or 11 fluorescent lamps, and a TV. Exceeding the energy limit (the amount of electricity used at one time) trips the device, which automatically resets a few seconds later, so the household has time to switch off excess lamps or appliances.

"It does not require a meter – meter-cheating is another major form of energy theft – and does not require monitoring or maintenance visits because it automatically resets after tripping," says Juan Carlos Del Valle, head of ABB's low-voltage products business in Argentina which pioneered the device.

The current limiter takes minutes to install, and because it does not rely on electronic components, is one-fifth the price of competing solutions.

ABB in Argentina has also developed an energy anti-theft system that prevents attempts at clandestine connections from succeeding and protects the person attempting the connection from electrocution.

Economic performance

Breaking the cycle of poverty in Brazil

A child who remains in school, or an adult who has an opportunity to return to the classroom, can become a better, more productive citizen.

For nearly three decades, ABB in Brazil has sponsored education programs that support school studies and offer lessons in good citizenship, contributing to the country's economic progress and stability.

An educated population helps small enterprises start up and grow. That helps improve living conditions, increase incomes and ultimately breaks the cycle of poverty by offering a chance for higher education, employment and better jobs. ABB helps hundreds of children and adults in educational programs like Franz Voegeli school, the Criança Futuro Esperança (Children with a Future Full of Hope), Batuira Nucleus and Quintal Magico in São Paulo, as well as the Meeting Room project in Minas Gerais.

ABB, with contributions from employees, invests roughly US$ 200,000 each year in these programs in Brazil.

PCB clean-up in Serbia

During the 1999 war in Kosovo, NATO bombing raids in Serbia demolished buildings and caused environmental damage.

After the war, the United Nations hired ABB to contain and dispose of PCB waste at the bombed-out Zastava car factory in the city of Kragujevac, 150 kilometers from Belgrade.

Air strikes destroyed two transformers in the paint shop, spilling PCB oil (used as insulation in transformers and capacitors) onto the concrete floor and contaminating 176 tons of paint sludge in two sediment basins.

ABB is removing the PCB-contaminated paint sludge and waste, including 50 cubic meters of contaminated concrete, thereby helping in economic reconstruction in the region.

The specially crated waste will be destroyed at PCB disposal sites in Germany and Switzerland.

Sending 20,000 PCs to South Africa

The Digital Partnership is an initiative to put reconditioned personal computers in the hands of people who might otherwise never have access to computers, software or the Internet.

It was launched by the Prince of Wales International Business Leaders Forum (IBLF) with the support of the World Bank, the South African government and community partners, plus a network of international companies in Europe, the U.S. and Asia.

ABB is sending more than 20,000 of its decommissioned three-to-four-year old computers to South Africa where they will be cleaned, refurbished and put to use in schools and social development programs.

Sharing technology boosts trading between emerging markets, and contributes to economic and social development.

Modernizing the Syrian power network

ABB in India's largest-ever export order, for high-voltage substations, epitomizes the company's policy of sharing new technologies with developing nations.

Early in 2003, ABB in India won an order from the Public Establishment of Electricity for Generation and Transmission (PEEGT), Syria's power generation and transmission utility, to engineer and build six high-voltage substations that will upgrade Syria's transmission network, and improve power supplies in the towns of Dera, Al-Fayha, Bebila, Telhamis, North Aleppo and Sarakeb.

For the Syrian order, ABB in India will manufacture power transformers, instrument transformers, outdoor circuit breakers, medium-voltage switchgear and control and relay panels at plants and facilities in Vadodara, Nashik and Bangalore.

ABB's strategy of sharing technology with developing countries raises national quality levels, improves the environment, raises living standards, and contributes to economic and social development, while at the same time growing ABB's business.

Manufacturing core products in carefully chosen markets like India helps ABB find new global business and cultivate new customer relationships. It's another step in the cycle of technology transfer: high technology power equipment manufactured in India is now affordable for other emerging markets, boosting south-to-south trading.

Read more about ABB's economic performance on page 40.

Technology that slashes pollution levels

ABB's products and services are designed to improve the performance of utility and industry customers but, at the same time, ensure environmental impact is minimized. The reduction of harmful emissions and the development of alternative energy products are just two ways in which ABB is working to improve the environment.

To find out more visit the environmental section on www.abb.com/sustainability

Highlights

- Pioneering project to bring power to offshore platforms
- ABB is main supplier for Denmark's largest wind farm
- Power project wins award for environmental excellence
- ABB finalizes project to help China plan energy needs
- Maximum savings at a MINI plant
- Order received for world's largest storage battery

Innovative technology cuts harmful emissions by 99 percent

ABB is reducing carbon dioxide emissions from oil platforms by enabling electricity supplies to be delivered from onshore facilities rather than produced at sea.

The innovative technologies developed by ABB are transmitting power from conventional, land-based, hydropower plants to platforms with minimal environmental impact.

The level of CO_2 produced by a shore-based hydropower supply system is less than one percent of the emission caused by generating the power offshore.

Results from a pioneering ABB project at Statoil's Troll A platform located 70 kilometers off the coast of Norway show that the ratio of CO_2 emitted by power generation onboard, against power generated by hydropower onshore, is 800:6.

Most platforms are powered by generators and compressors driven by gas turbines installed on board. Many of these installations have a total efficiency of not more than 20–25 percent, leading to high consumption of gas and emissions of 800 kg CO_2/MWh.

Two unique and environmentally-friendly ABB technologies are being used: a high-voltage direct current (HVDC) light underground transmission system, and the cable-wound Motorformer, which drives a compressor without a step-down transformer.

HVDC Light and a subsea cable transmit the power, generated by hydropower on shore, from Kollsnes to two Motorformers for the electric drive system on the Troll A platform. The system creates emissions of only 6 kg CO_2/MWh.

Denmark's largest wind farm, driven by ABB technology, saves the environment from 300,000 tons of carbon dioxide a year.

Working in the sea for renewable energy

ABB technology is harnessing the elements in Nordic waters to produce large-scale sustainable energy.

In Denmark, the next large offshore wind farm is being controlled by ABB products and Industrial IT systems.

The Nysted offshore wind farm, located ten kilometers off the coast of south Sealand, comprises 72 wind turbines. They will generate approximately 600 million kWh of electricity annually, sufficient to supply 125,000 single-family houses with renewable energy.

ABB is supplying a SCADA system for overall control and regulation of the wind farm, as well as the collection grid between the wind turbines and the substation, and land cables.

The 72 wind turbines will save the environment from 300,000 tons of carbon dioxide annually, and more than 400 tons each of sulphur dioxide and nitrous oxide, which would have been emitted from existing power stations to provide the same amount of electricity.

The environment and animal life around the wind farm is carefully supervised at all times. Inspections show that when finished, it will add extra life to the area, as the many foundations are ideal for seaweeds and mussels.

Environmental performance

Project in Australia wins environmental award

The Murraylink project in Australia is the world's longest underground high-voltage cable, running 177 kilometers from the state of Victoria to South Australia.

"The Murraylink project in Australia brings the best of our collaborative efforts to the table: the technology is unparalleled and we are better meeting the needs of our customers for more reliable, environmentally-sound power," says Jeffrey A. Donahue, president and CEO, TransÉnergie U.S.

It uses ABB's high-voltage direct current (HVDC) light technology, one-fifth the size of conventional HVDC technology for the same rated power.

In October 2002 the project was awarded the high-profile Case EARTH Award for Environmental Excellence.

ABB helps China plan energy needs

An ambitious project to measure the impact of electricity generation, managed by ABB under the Alliance for Global Sustainability, has been successfully completed in the Chinese province of Shandong.

More than 70 scientists, engineers and academics in four countries worked for three years to establish a methodology to gauge the full environmental, social and economic effects of power generation. They also show the importance of incorporating health aspects into all future planning.

The results could have an immense impact on the future planning and development of the power industry, said a Chinese official.

Maxi savings for a MINI plant

ABB's drives save energy and costs, regulating a motor to the speed it needs to meet its requirements, rather than allowing it to run at full throttle.

Several industries rely on drives, from pulp and paper makers to mining companies and even lift operators at ski resorts.

BMW opted for ABB's low-voltage drives at a new MINI paint shop in the United Kingdom, and was rewarded with about US$ 40,000 in annual savings on electricity.

Twelve low-voltage AC drives were installed to run pumps at the pre-treatment plant; regulating the pumps' speed saved about 480,000 kWh a year.

ABB provides reliable power in some of the world's most hostile weather conditions.

The most powerful storage battery in the world

Winter temperatures in Fairbanks, Alaska, can dip below – 51°C, cold enough to freeze water pipes in about two hours.

So Alaskans want reliable power. For that, they turned to ABB and BESS (battery energy storage system).

An ABB-led consortium is making the world's most powerful nickel-cadmium (Ni-Cd) battery, a 40-megawatt, multi-cell behemoth housed in a heated building with a spill container to ensure there are no leaks.

In hostile climate conditions like Alaska, the Ni-Cd solution is the best option for reliable power back-up because it provides instant power until a diesel back-up generator comes on line. The environment benefits by avoiding the need for idling diesel engines.

The battery, which is manufactured from recycled cadmium, is safe, reliable and will be recycled again at the end of its 20-year life cycle. Watering the electrolyte is the only maintenance necessary.

Read more on ABB's environmental performance on pages 41–44.

Our social policy in action

ABB is involved in a wide range of social activities, both large and small, institutional and personal. We work to improve social conditions for the communities in countries where we operate, as well as for individuals and our employees. ABB's social policy, launched in 2000, underpins our commitment to society.

Highlights

- More than 800 employees join Special Olympics as volunteer supporters
- Weekly visits help the elderly in Romania
- ABB pursues equality of opportunity with projects in U.S. and South Africa
- Working conditions and health of employees receive special attention in Poland and Sweden
- ABB in India finances and implements community development programs
- Group social policy implemented in Italy
- Looking after disadvantaged children in Peru
- Sustainable development project benefits people living close to Kruger National Park airport

Actively working for the Special Olympics in Germany

Before the games begin, Special Olympics athletes take an oath as special as they are: "Let me win, but if I cannot win, let me be brave in the attempt."

It's an attitude ABB takes to heart with an ongoing commitment to support the winter and summer Special Olympic games in Germany.

To find out more visit the social performance section on www.abb.com/sustainability

The Special Olympics was started in 1968 by Eunice Kennedy Shriver, sister of late U.S. President John F. Kennedy. It's now the world's biggest sports organization for the mentally challenged, and is officially recognized by the International Olympic Committee.

Under the motto "Together Unlimited," ABB in Germany has embraced the games as a way to gain greater acceptance in the community for mentally challenged people and their families.

In four years of sponsorship, the event has won the support of ABB staff in several countries and from all ranks: apprentices, trainees, blue-collar workers, white-collar staff, works council members, managerial staff and members of the board.

ABB's support goes beyond money, and to date more than 800 employees have joined the games as volunteers. ABB pays for their travel and accommodation; volunteers take the time off as holiday.

ABB also organizes fundraising events for the games, and has started participation schemes with local workshops for the disabled.

The winter games in the Bavarian Alps in February, 2003, drew 110 ABB volunteers, who helped athletes in cross-country and alpine skiing, snowboarding, speed skating, figure skating and curling.

The volunteers helped organize the event, escort athletes, and coordinate the daily medals ceremonies.

ABB volunteers make regular visits to elderly people without families in Bucharest.

Caring for the elderly in Romania

ABB employees in Romania have responded enthusiastically to the appeal of the German embassy in Bucharest and the Lutheran Diaconal Association (DIAKONIE) for help in taking care of about 100 lonely, elderly people.

All are more than 80 years old, and alone in Bucharest. They belong to the German minority in Romania, coming from the Transylvania and Banat regions.

Since November 2002, eight ABB volunteers have regularly visited one elderly person each in the city to talk to them, address their concerns and be a companion.

The two-hour weekly visits are permitted during working hours, and ABB employees also maintain these friendships in their spare time. It's proven so successful that another five people will be taken into the program.

The visits help both sides. The elderly are happier, have new interests and look forward to the next meeting.

The ABB volunteers are happy to be involved in a meaningful initiative that clearly does such good for other people.

Social performance

U.S. women engineers program

Less than three percent of American students studying abroad are engineering majors, and few of them are women. To get those numbers up, ABB is the sole sponsor of the U.S. women engineers program, an engineering scholarship for women.

The scholarship is administered by the New York-based Global Engineering Education Exchange (GE3), which offers international exchange opportunities for engineering students, and is part of the Institute of International Education.

In addition to funding the scholarship, ABB encourages scholarship winners to visit and make use of its international offices.

Polish employees study social policy

As part of its social policy, ABB carries out surveys of employees' opinions on company policies.

In Poland, all employees were sent a detailed four-page questionnaire relating to the company's social and overall policies.

The independently audited results, analyzed by sex, age, education, position and length of service, provide valuable pointers to areas of improvement and current levels of policy understanding.

Improving workers' health in Sweden

ABB has been successfully tackling an increase in work-related sickness in Sweden.

A survey tool, called "The Flower," has been introduced to investigate conditions in the workplace, as well as key legislation, lifestyle and psycho-social issues. Its conclusions are then discussed in the workforce and measures agreed.

The result: sick leave among ABB's white- and blue-collar workers fell sharply in 2002.

Italy: leaders of the pack

After a high-level stakeholder meeting in 2002, ABB in Italy decided to implement the group social policy at the local level and get independent certification. In recent weeks, RINA, Italy's independent auditors, gave their approval. Says Antonio Giacomucci, country sustainability controller: "We've improved a great deal, from working with our suppliers to better accommodating employees with disabilities."

ABB in Italy also won an award for its environmental product declarations concept in the seaside resort of Laigueglia, which promotes itself as one of the country's most sustainable towns.

ABB South Africa sells 20 percent of operation to women's group

Racial discrimination under the old apartheid regime in South Africa created many inequalities, which the current government is trying to redress.

Black economic empowerment is a policy to involve people previously disenfranchised by apartheid in the business life of the nation by transferring ownership of key industries to them.

Fully supporting the policy, ABB in South Africa sold 20 percent of its local holding company to Women's Investment Portfolio Holdings Limited (WIPHOLD Private Equity), a financial services group managed by women.

WIPHOLD will sit on the ABB South Africa board and participate in operational committees including auditing, employment equality and sustainable development.

ABB India – creating a community trust

ABB in India is creating a corporate sustainability responsibility trust to plan and implement community development programs.

The foundation will oversee programs in education, health, environment, technology, economic self-reliance, empowerment and sustainable development.

It will provide funds for ongoing initiatives, and ensure ABB is able to respond to natural disasters.

Caring for disadvantaged children in Peru

Employees of ABB in Peru visit about 50 children living in the poor mountain township of Pachacutec, bringing them food, water and presents. They also raise money and recruit volunteers for "Operation Smile" to help about ten poor children each year undergo operations to correct cleft palates.

Read more on ABB's social performance on pages 45–48.

An ABB-built airport improves quality of life through benefit sharing.

Sustainability a top priority at Kruger National Park airport in South Africa

ABB has introduced a model of sustainable development in Mpumalanga, South Africa, with the opening of the US$ 44 million Kruger-Mpumalanga International Airport (KMIA), just 20 kilometers from world-famous Kruger National Park.

KMIA is the result of close collaboration between international investors and local stakeholders to address concerns and optimize the project's economic, social and environmental benefits.

The 340-hectare airport can accommodate large airliners. Charter routes are being developed to handle direct flights from Europe and other international cities.

KMIA offers direct access to some of the most spectacular tourist destinations in the country. It is located near Nelspruit, the capital city of Mpumalanga, one of the fastest growing regions in the country.

The airport is expected to develop into an economic hub, handling freight for the region's thriving export industry.

A unique concept for promoting social investment in the local community is benefit sharing. The local Mbuyane community of 30,000 people collectively has a ten percent stake in KMIA, and also receives a fixed fee for each departing passenger.

These revenues will be used for social projects, including community centers, roads, schools and sporting facilities.

The airport today

ABB is seeking to divest its 90 percent equity stake in KMIA to new investors, which may include empowerment groups, as part of its effort to focus on core areas of power and automation technologies.

Asking more of suppliers

A series of dialogues beginning in 2001 with stakeholders in 34 countries – including employees, customers, NGOs and governments – identified supply chain management as the most important element of a corporate social policy.

ABB's social policy guidelines for suppliers

- No child labor
- No forced labor
- Provide a safe and healthy workplace
- Ensure effective employee consultation
- No employee discrimination
- No mental, physical or verbal abuse
- Comply with law and industry standards on working hours
- Offer adequate wages
- Measured against ABB's social policy principles

Having already built environmental management into the supply chain, we are now focusing on managing the social dimension.

We've based our approach on our social policy. We also observed how other leading companies successfully managed social policy in their own supply chain.

With this background, we are focusing on our key global and local suppliers, and pushing ahead in four areas:

- Organizational competence – ensuring our supply managers have the knowledge, skills and experience needed to integrate our social policy into the supply chain
- Supplier qualification and monitoring – ensuring new and existing suppliers understand and follow ABB's social policy guidelines
- Guidelines for suppliers – ensuring our suppliers achieve the standards we ask for through training and guidance materials
- Audits and reports – ensuring new and existing suppliers are covered by a risk-based audit program to meet ABB's social policy guidelines

Managing suppliers in China

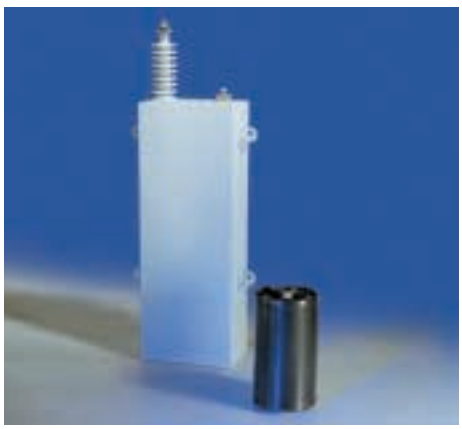
ABB Xiamen Low Voltage Equipment Co. Ltd. is located in Xiamen in southern China. In 1998 it successfully achieved certification of its environmental management system to the international standard ISO 14001, and certification to DNV's internationally recognized Occupational Health and Safety Management System (OHSMS), and in 2001 the system was renewed adopting OHSAS 18001.

Its commitment to health and safety extends to suppliers, with the local sustainability officer conducting routine health and safety audits of suppliers, and helping them to improve working conditions where necessary.

Amy Li, local sustainability officer, said: "Health and safety is a priority area for us, and we have gained a lot of experience having achieved OHSMS in 1998. But it is important that we share our expertise, and work with our suppliers to encourage continuous improvement in their safety performance."

Building sustainability into new products

Sustainability is literally being built into ABB's products as they are developed.



New capacitors for high-voltage direct current (HVDC) applications store twice the energy in half the space, and weigh 80 percent less than the units they replace.

When designers work on new products they have at their fingertips environmental guidelines and Life Cycle Assessments (LCAs) on ABB's intranet.

Over the years, more than 100 LCA studies have been made and some 1,000 employees have been trained in using the supporting software.

The information is provided by a specialist research team which supports the business on all environmental aspects of product development. The specialists have in-depth knowledge about the environmental impact of different products and technical solutions.

A life cycle perspective that covers the whole industrial process – from design and material selection to waste management – is now required in all of ABB's product development.

The result: ABB reduces environmental impact in its new technologies and continually improves existing products. It means, for example, supplying products and systems that are more easily recycled, require less material and consume less energy.

Energy efficiency is particularly important, since the greatest environmental impact usually occurs as a result of a product's energy consumption.

As a service to customers, ABB communicates environmental information and product performance through environmental product declarations. They are produced in accordance with ISO 14025 and aim to give factual, comparable data to help customers choose the most environmentally-friendly products on the market.

ABB is convinced that its life cycle focus in product development contributes to a competitive edge in the marketplace.

People are ABB's number one asset

The welfare and development of our employees are key to the success and future prospects of the ABB Group. In a period of major structural change, such as the one we have been going through, it is doubly important that we address our employees' needs – developing skills and raising morale.

To find out more visit www.abb.com/careers

The Step change business improvement program – geared to eliminate US$ 800 million in costs by mid-2004 – has been accompanied by some tough decisions on reducing jobs and sharpening our business competitiveness. However, we will not let slip our leading position in social and environmental performance.

Despite difficult decisions, staff loyalty remains high. Our employees are proud of the ABB brand and are making every contribution possible to bring us back to profitability. Their commitment to quality and innovation is exemplary, even in hard times.

The Step change program is also intended to alter the way employees work together – a true change in culture. A spirit of greater openness, trust and respect is already becoming visible, and is being reflected in more efficient working practices.

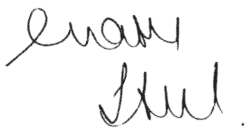
We have a strong sense of social responsibility towards our people. Our 13-point social policy (see page 36), adopted in 2000, underpins the welfare of our employees and is specifically designed to safeguard their rights and working conditions.

In 2002, we focused on two key social policy concerns – supply chain management (see page 20) and occupational health and safety (see pages 24–25).

We are currently testing a new scheme to assess the social performance of suppliers to ensure they match ABB standards. ABB is also introducing the latest health and safety standards throughout the group, backed by new guidelines, reporting mechanisms and a "zero target" for fatal accidents.

Improvements in these areas are necessary but we will not stop there. The level of expertise and the benefits of cultural diversity are great within ABB, but we want to further strengthen our employees' know-how and skills through new learning and training schemes, and improve equality of opportunity throughout the group.

We appreciate that our employees are our capital.



Gary Steel,
Head of Human Resources and executive committee member responsible for Sustainability Affairs, ABB Ltd

Step change – a business improvement plan

The Step change program, started in October 2002, is one of the measures taken by the company to increase market competitiveness. It will cut ABB's cost base by at least US$ 800 million by mid-2004 and improve business practices throughout the group.

As a consequence of focusing on our core power and automation technologies businesses, we will divest units that employ around 30,000 employees. In addition, between 10,000 –12,000 jobs will be cut, so we expect to employ just under 100,000 people by mid-2004.

This is not an easy process. But we are continuing to evolve and develop our company culture, to ensure the involvement of those affected. This is partly accomplished with open communications practices, like live telephone and video conferences, direct e-mail feedback and regular staff meetings at all levels. Of course, this cultural evolution takes time, but we are striving to treat all employees with respect and dignity.

In carrying out this program, we are meeting social and contractual commitments, and complying with national labor laws, trade union and employee agreements. We are ensuring that updated social benefits plans exist at country level and that employees and their representatives are fully aware of their rights. In short, we are practicing socially responsible restructuring as called for by our social policy.

Meeting new international standards

Guidelines have been implemented to improve the health and safety of employees.

ABB in China leads the way in health and safety management

More than 15,000 people died in manufacturing and mining accidents in China in 2002, prompting national legislation on occupational health and safety.

Five ABB companies in China have external certification to OHSAS 18001, the internationally recognized health and safety management system – while others are establishing similar management systems.

This has led to improved performance with working hours lost significantly reduced between 2000 and 2002, even though the workforce increased.

Safety awareness is rising among ABB employees and managers through continuous training and education. This good business practice is being extended to our suppliers and contractors.

ABB's health and safety expectations

- Leadership and accountability – clearly defined responsibilities, adequate resources, and accountability for managers
- Managing health and safety risks – at every stage of the project, service, or manufacturing life cycle. Meeting national and international standards is a minimum requirement
- Health and safety competence – all managers, employees, safety advisors and contractors know their responsibilities and have the training and experience to carry them out
- Safe contractors and business partners – contractors and suppliers are selected and monitored to ensure they perform to our health and safety requirements
- Health and safety is integrated into the processes for managing change, both globally and locally
- Crisis and emergency management
- Accident analysis and prevention
- Health and safety performance is routinely reviewed by managers, supported by reporting process

ABB employees and contractors in manufacturing, construction and service activities, encounter hazards and risks that must be identified, prevented or controlled. It is for this reason that we actively manage our health and safety performance, through our leadership and by adopting the latest international management systems and standards.

The starting point of our health and safety program is Principle 5 of our social policy, approved by ABB's executive committee.

Principle 5 commits ABB to a safe and healthy work environment at all sites and facilities, and to take steps to prevent accidents and injury during work by minimizing, as far as reasonably practicable, the causes of hazards inherent in the working environment.

The group health and safety expectations document provides a framework for safety management, setting out the organization, responsibilities and arrangements at every level of the organization.

Every business in the group must address our health and safety expectations. The level of implementation is proportional to the health and safety risk profile of each business, national and international regulatory requirements, and participation in voluntary health and safety programs. The expectations framework enables existing systems to be maintained and, where necessary, upgraded. Compliance is audited by the sustainability affairs team.

ABB is building on its commitment to work toward best practice in health and safety.

Group instruction

All fatal accidents or serious incidents occurring at work involving ABB employees or people for whom ABB is accountable must be reported immediately to the CEO. They must then be thoroughly investigated to prevent any recurrence. There are also new provisions for reporting incidents involving ABB employees traveling on company business.

Management system goal and guidelines

ABB has set a goal for all business units to implement a formal occupational health and safety management system, based on the principles of OHSAS 18001 and the ILO guidelines, by the end of 2004.

We have developed an implementation guide, model manual, and supporting advice and materials. Progress will be assessed using a gap analysis tool.

Project management

We are developing a process that ensures health and safety risks are identified and controled at every stage of a project's life cycle.

Group standards

We are trying to meet international standards as a minimum, bringing into line the existing operational health and safety standards within the group.

Supply chain

ABB is trying to influence suppliers to improve their health and safety, which is covered in more depth in the supply chain article in this report (see page 20).

Our customers and health and safety

Nearly 50 percent of ABB's group account managers have noticed increasing customer attention to health and safety issues, according to a 2002 study.

Statoil of Norway's Troll A project illustrates the point. The Troll A offshore oil and gas platform will use ABB's HVDC Light and Motorformer technologies to bring power from land to the platform.

One of Statoil's key requirements for the project was health and safety, setting tough performance criteria. ABB's focus on health and safety positioned us well, and enabled us to meet Statoil's requirements, proving that health and safety does give us a competitive advantage.

An example: two million working hours without lost time for accidents on the Kvitebjorn platform in the North Sea.

Committed to improving people's lives

One in every four people on earth lives without electricity. ABB is heading an initiative to bring affordable electricity to rural areas of Africa and South Asia to boost sustainable development and improve living standards.

The Access to Electricity program is ABB's response to the United Nations Global Compact initiative to grow sustainable business in the world's least developed countries.

ABB is currently defining and evaluating pilot projects in a number of countries, including Senegal and Tanzania, with a wide range of partners, including the World Bank, utilities and other companies, governments and non-governmental organizations, development aid agencies, financial institutions and local groups.

The partnerships are designed to address a number of the local community's social issues at the same time.

ABB's role is to supply technical expertise on power projects, experience in developing countries and rural communities, and a wide range of contacts, complementing the work of partners who are developing infrastructure such as roads, water and sanitation, education and telecommunications.

"We currently have a number of standard business contracts in rural areas undertaken in the spirit of Access to Electricity. We are now defining which new projects will fall fully within the program's parameters," says Anders Nordström, ABB's project leader.

ABB has been promoting Access to Electricity widely. Reaction at international sustainability meetings – from Johannesburg to Berlin – as well as in private discussions, has been very favorable.

To find out more visit the common efforts section on www.abb.com/sustainability

Bringing electricity to 100 villages in Laos
ABB has expanded the power grid in northern Laos, designing and building a 340-kilometer transmission line and a 282-kilometer power distribution network through rugged and dangerous terrain to bring electricity to around 100 rural villages.

Working with the national power utility, ABB planned and implemented a sustainable electrification program, mainly using local labor.

The difficult terrain of rice fields, mountainous areas and thick forests called for adapted technology and extensive local labor, as well as the use of elephants and other traditional methods.

The project, nearing completion, is bringing benefits to some of the poorest communities in one of the world's least developed nations.

Partnership pays off in Bangladesh

ABB is carrying out an electrification project in an area of Bangladesh, in cooperation with partners in Norway, to boost industrial development and improve living standards.

ABB employees from Norway are working with local partners to build three new substations and refurbish two existing substations in an area 200 kilometers from the capital, Dhaka, which is not connected to the national grid.

Partnerships are key to the success of the project. Funding and financial guarantees have come from private institutions in Norway, and the Norwegian Agency for Developing Cooperation.

The work, commissioned by the Bangladesh Power Development Board, is due to be completed by July 2004.

How we set and meet our targets

In 2002, ABB's global sustainability affairs network came together in 11 regional working meetings – in Tallinn (Estonia), Prague, Milan, Zurich, São Paulo, Stockholm, Raleigh (U.S.), Ladenburg (Germany), Hong Kong, and by telephone conference with Near East countries – to develop a model sustainability business plan for our country sustainability controllers (CSCs). The aim: to ensure the group's sustainability objectives are pursued in more than 50 countries, in accordance with a common framework, which is agreed by all CSCs.

The plans contain four main elements: ongoing objectives, key activities, tasks (environmental, social and communications) and a detailed action plan.

As part of the ABB Group budget for 2003, all CSCs submitted country sustainability business plans, which were aggregated to provide a global overview of ABB's sustainability activities, costs and resources.

Ongoing objectives

Five main objectives were set to raise sustainability performance:

- Add value to our business and reduce its exposure to risks
- Increase awareness on sustainability matters
- Further raise environmental performance
- Raise social performance
- Integrate sustainability along the supply chain

Key activities

To ensure progress, ten key activities were defined:

- Promote sustainability awareness within our country organizations, including the education and training of employees
- Network and participate in group sustainability efforts and build sustainability competences
- Coordinate the implementation of the social policy, focusing on the major social challenges that we face
- Coordinate and participate in stakeholder dialogue on sustainability issues
- Facilitate the development of integrated management systems for quality, the environment and occupational health and safety
- Include and monitor ABB's sustainability requirements in the supply chain
- Coordinate the annual reporting of sustainability operational performance indicators from all our facilities and audit the quality of the figures
- Help the country communications manager develop sustainability messages for internal and external communications activities

Statistics

	People	Man-years	Costs (US$ thousands)
Country sustainability controllers	46	40	3,947
Local sustainability controllers	420	84	3,810
Sustainability affairs, central	5	5	1,358
Total	471	129	9,115

No. of manufacturing sites	504
No. of sites with an EMS	475

- Help ABB managers to identify and work with partners in community involvement programs
- Develop and maintain a sustainability plan in line with this model, direct the role of the local sustainability officers and report progress to the group

Tasks

The work of the CSCs falls into three main areas – environmental, social and communications. Detailed tasks were identified for each area to support group progress and address weaknesses.

These tasks, with expanded objectives and key activities for the country sustainability business plans, are published in full in the Web version of this report. However, the main focus is as follows:

- Raise ABB's environmental performance by actively promoting the application of environmentally sound manufacturing processes and services, increasing the recycling of resources, the use of renewable energy and materials, and reducing waste and emissions
- Oversee the implementation of the health and safety principle of the ABB social policy, as well as the entire social policy
- Help the country communications manager enhance ABB's brand by providing guidance on sustainability matters and by helping prepare sustainability messages and materials for local audiences

Action plan

Each CSC is then required to develop an action plan for yearly review by the group sustainability affairs team, incorporating the objectives, key activities and tasks outlined above.

The plan allows ABB to establish actions, resources and budgets for each of the three areas – environmental, social, communications – to address ABB's local needs and priorities in the country.

Follow-up

The total cost of ABB's sustainability affairs organization – comprising 471 people at group, country and local plant level – is US$ 9.1 million, of which one-third represents expenses and two-thirds personnel costs. (The personnel costs of local sustainability officers are separately covered by the companies where they are located).

To provide and ensure leadership, each country sustainability plan was screened for compliance with certain key sections of the model plan:

- Key activities linked to national needs
- Environmental management systems covering all employees, audits, continuous improvement projects
- Social policy coordination, occupational health and safety, stakeholder dialogues, community involvement
- Internal and external communications, promotion of sustainability material
- Budget and resources details

These country sustainability business plans help ABB achieve a consistent and comprehensive approach to sustainability management throughout the group.

The journey so far

2001
Dow Jones Sustainability Index rates ABB top of its group for the third year running. First "triple-bottom-line" ABB sustainability report introduced, inspired by the Global Reporting Initiative guidelines. Environmental product declarations cover ABB's main product lines. ISO 14001 in 98 percent of ABB manufacturing sites.

1999
ISO 14001 is implemented in 519 sites, including a company in South Africa's Black Economic Empowerment scheme. ABB produces first environmental product declarations (EPDs). ABB's CEO initiates World Energy Council's program to reduce greenhouse gas emissions.

1997
123 sites gain certification to ISO 14001. ABB publishes a second generation of environmental objectives and launches second-generation LCA software tool and database.

1995
ABB publishes its first set of environmental objectives. The first design tool for Life Cycle Assessments (LCAs) of products is launched. 15 ABB sites are certified to BS 7750 or EMAS.

1993
A network of environmental controllers is appointed for countries and factories. Thirty-eight countries participate in the start-up of ABB's environmental management program first reporting procedures are introduced.

2002
Sustainability business plans implemented in 50 countries. ABB launches joint initiative “Access to Electricity” at UN World Summit Johannesburg. ABB implements latest occupational health and safety standards. Environmental management systems include employees in non manufacturing facilities, including group headquarters.

2000
ABB divests power generation business. ABB launches a social policy and publishes its first sustainability report including both environmental and social performance. ABB participates in the launch of the United Nations Global Compact. ISO 14001 is implemented in 539 sites.

1998
ISO 14001 is implemented in 449 sites. ABB’s CEO serves on the World Commission on Dams. First summaries of ABB’s environmental management report are published in 23 languages to improve communication.

1996
ISO 14001 is introduced. A total of 50 ABB sites gain certification, including a first site in China and a first construction site.

1994
Implementation of environmental management systems (EMS) becomes a group-wide objective, involving 43 countries. ABB publishes its first environmental report.

1992
ABB signs International Chamber of Commerce (ICC) Business Charter for Sustainable Development, sets up an environmental advisory board and establishes its environmental affairs organization.

Converging on the GRI's recommendations

In this section of the report, you will find facts and figures on our performance during the fiscal year 2002. For the second consecutive year we have chosen to follow the reporting guidelines defined by the Global Reporting Initiative which we follow in reporting our economic, social and environmental performance. Each item carries the relevant GRI indicator number. Some of the sections in the GRI guideline are not relevant to ABB and have therefore not been included. (See www.abb.com/sustainability for more details).

The reporting boundaries cover all manufacturing facilities, approximately 450 sites, located in 48 countries, which are all countries where we have substantial manufacturing activities.

For non-manufacturing organizations, which have limited environmental impact, we have estimated some of the indicators, such as the use of electricity, district heating and water consumption per person. The estimates are based on data from our many reporting countries. When we have used an estimate, it is clearly indicated in the table.

GRI content reference matrix

Section	GRI guideline indicators	Page number
Vision and strategy		
Statements from the CEO	1.1 – 1.2	2–3
Company profile	2.1 – 2.9	34
Report scope	2.10 – 2.22	35
Governance structure	3.1 – 3.8	33
Stakeholder engagement	3.9 – 3.12	33
Policies and management systems	3.13 – 3.20	36–39
Performance indicators		
Economic performance	EC1 – EC10	40
Environmental performance	EN1 – EN35	41–44
Social performance	LA1 – LA17	45–46
	HR1 – HR14	46–47
	SO1 – SO7	47–48
	PR1 – PR9	48

Governance structure and stakeholder engagement

Structure and governance

3.1 Governance structure of the organization, including committees

The board of directors defines the direction of ABB's business and issues the necessary instructions. It determines the organization of the group and appoints and supervises the management and representation of ABB.

There are two major committees – the nomination and compensation committee, and the finance and audit committee. The former determines the selection of candidates for the board and its committees, plans for the succession of directors and determines the remuneration of the members of the group executive committee.

The latter oversees the financial reporting processes and accounting practices, evaluates the external and internal auditors, reviews audit results, monitors legal compliance of ABB's financial statements, and assesses risk management processes and internal control systems.

The board has also approved the formation of a new strategy committee, which will be constituted by mid-2003.

The chief executive officer (CEO) and the other members of the group executive committee are responsible for ABB's overall business, affairs and management.

Since the chairman of the board is also the CEO, the board has created a lead director to address situations of conflicting interests between the chairman of the board and board members.

Further information on corporate governance is published on ABB's Web site www.abb.com/about

3.2 Independent, non-executive directors

All board members, except for the chairman/CEO, are independent, non-executive directors. The board defines "independence" as per the New York and Swiss Stock Exchange standards, whereby they are to have no involvement in operational management, and avoid any situation in which their interests may conflict with those of ABB.

3.3 Expertise of board members

The nomination and compensation committee selects and recommends suitable candidates for the board in accordance with guidelines contained in the committee's charter. The committee ensures that new directors receive the appropriate introduction, and that all directors receive continuing education and training to fulfill their obligations.

3.4 Board-level processes for overseeing sustainability

The board supervises the executive committee and the CEO, which are supported by the sustainability affairs organization, responsible for the environmental and social performance of the group. Sustainability risks and opportunities are also investigated in coordination with other group functions, e.g. mergers and acquisitions (due diligence), risk and insurance (real estate liabilities), and ABB's bid evaluation committee (customer and project risks).

3.5 Linkage between executive compensation and performance

Executive compensation consists of a base salary and a bonus, linked to unit and group financial performance. Achievement of non-financial goals is linked to an executive's individual performance. Executives may also participate in share options linked to group/divisional performance.

3.6 Organizational structure for sustainability policies?

The head of ABB's sustainability affairs organization is responsible for these matters. During 2002 he reported directly to the CEO. As from 2003, he reports to a newly appointed executive committee member – whose responsibilities include human resources and sustainability. Reporting functionally to the sustainability affairs team is a large network of some 500 sustainability controllers worldwide.

3.7 Mission and values statements relevant to sustainability performance

Sustainability is one of ABB's core values, described in the business principles statements which are mandatory for all employees and published on the group Web site (www.abb.com/about). These statements are supported by environmental and social policies. The environmental policy is 98 percent integrated into ABB's manufacturing sites and workshops worldwide. The social policy, launched in 2000, is approximately 15 percent implemented.

3.8 Mechanisms for shareholders to give recommendations to the board

ABB's investor relations team is in frequent contact with shareholders, holds quarterly briefings and issues quarterly updates, inviting feedback through the ABB Group Web site. These facilities provide opportunities for minority shareholders to express their views to ABB's management.

Stakeholder engagement

3.9 Identification and selection of major stakeholders

Stakeholder engagement is conducted on two levels:

1) at group level, by a top-level stakeholder advisory panel
2) at country level in some 35 countries worldwide

Stakeholders are identified among representative groups that are impacted by, or have an impact on, the company, e.g. customers, employees, suppliers, business partners, and society at large.

3.10 Stakeholder consultation

The group level stakeholder consultation is conducted at least once per year – the most recent in June, 2003 in Zurich.

The country-level stakeholder dialogue sessions are also held at least once per year. Currently, 35 countries are participating in the program.

3.11 Type of information generated by stakeholder consultations

Stakeholder dialogues over the last two years have focused on ABB's social policy – its scope, implementation, and the development of performance indicators.

The agenda of future dialogues is to be set by the participants to address local concerns.

3.12 Use of information resulting from stakeholder engagements.

Information from all stakeholder dialogue sessions is fed back to the sustainability affairs team and used to refine the social policy and improve implementation guidelines and indicators. A feedback report has been provided to all countries participating in the program so that they can learn from each other and raise their performance.

Profile of ABB and scope of report

Organizational profile

2.1 Name of reporting organization
ABB Ltd – the worldwide ABB Group – headquartered in Zurich, Switzerland.

2.2 Major products and services
ABB is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and currently employs about 135,000 people.

ABB Power Technologies serves electric, gas and water utilities, as well as industrial and commercial customers, with a broad range of products, systems and services for power transmission, distribution and power plant automation.

ABB Automation Technologies blends a robust product, system and service portfolio with end-user expertise and global presence to deliver solutions for control, motion, and plant optimization across the full range of process, discrete and utility industries.

ABB is a manufacturing and services group which uses a degree of outsourcing.

2.3–2.5 Operational structure, description of major divisions, and locations of the organization
The operational structure comprises two core Power and Automation Technologies divisions, supported by group staff functions (such as sustainability affairs, corporate communications, controlling, legal and compliance, human resources, etc), all reporting to a five-person executive committee. The president of the executive committee is the chief executive officer of the company. Also represented on the committee are the two heads of the core divisions, the chief financial officer and the head of human resources, who is also the executive committee member responsible for sustainability affairs.

The headquarters are based in Zurich, Switzerland.

2.6 Nature of ownership; legal form
ABB is listed on the SWX Swiss Exchange (virt-x), Stockholm Stock Exchange, Frankfurt Stock Exchange, London Stock Exchange and New York Stock Exchange.

As of December 31, 2002, Investor AB, Stockholm, Sweden, owned 120,067,731 shares of ABB Ltd, corresponding to 10 percent of total capital and votes. On March 17, 2003, the ABB Group announced that since March 14, 2003, it holds less than one percent of total capital and votes of ABB Ltd. The Capital Group Companies, Inc., Los Angeles, CA, U.S., informed ABB that as per March 11, 2003, it holds for its clients 64,043,388 shares of ABB Ltd, corresponding to 5.3 percent of total capital and votes.

To the best of the company's knowledge, no other shareholder holds five percent or more of the total voting rights.

2.7 Nature of markets served
ABB serves electric, gas and water utilities and the oil, gas and petrochemical industries. In the manufacturing, process and service industries ABB serves the automotive, cement, chemical, distribution, electronics, food and beverage, life sciences, marine, metals, mining, paper, petroleum, printing, telecommunications and turbocharging industries with application-specific power and automation technology.

2.8 Scale of reporting organization
Number of employees worldwide at end 2002: 139,051

Employees by region:	
Europe	65%
The Americas	17%
Asia	12%
Middle East and Africa	6%

Sales (revenues) for 2002:
US$ 18,295 million

Sales by region:	
Europe	56%
The Americas	23%
Asia	14%
Middle East and Africa	7%

Total capitalization: On December 31, 2002, the total capitalization (short-term borrowings and current maturities of long-term borrowings plus long-term borrowings and total stockholders' equity) was US$ 8,965 million.

Debt: (short-term borrowings and current maturities of long-term borrowings and long-term borrowings) was US$ 7,952 million.

Equity: (total stockholders' equity) was US$ 1,013 million.

Total assets: total assets were US$ 29,533 million.

2.9 Main stakeholders
Customers, employees, shareholders, creditors, suppliers, media and investment communities, business partners, and society at large (local communities, NGOs, academia, central and local government, trade unions, media, and banks).

Report scope

2.10 Contact person for the report
Christian Kornevall – head of ABB sustainability affairs.

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Web address: www.abb.com/sustainability

2.11 Reporting period
Fiscal year 2002.

2.12 Date of previous report
June 2002, covering fiscal year 2001.

2.13 Boundaries of report
Unless otherwise stated, this report covers ABB Group employees in more than 50 countries where ABB has appointed country sustainability controllers, responsible for driving ABB's sustainability management program in those countries and gathering all data consolidated in this report. About 92 percent of ABB employees are covered by this report.

2.14 Significant changes in size, structure and ownership
During 2002, ABB sold most of its Financial Services division, prepared for the divestment of its Oil, Gas and Petrochemicals division and Building Systems business area and reorganized its six previous divisions into two core divisions – Power Technologies and Automation Technologies. Regarding significant ownership changes in 2002, BZ Bank decreased its holding of ABB shares to below 5 percent and Investor AB increased its holding to above 10 percent. The Capital Group Companies, Inc., Los Angeles, CA, U.S., informed ABB that as per March 11, 2003, it holds for its clients 64,043,388 shares of ABB Ltd, corresponding to 5.3 percent of total capital and votes.

2.16 Effect of restatement of information
Due to the reorganization mentioned in 2.14, the number of employees reduced to around 139,000 in 2002, from around 157,000 in 2001, and the number of manufacturing sites and workshops covered by the sustainability management program reduced to 504 in 2002, from 550 in 2001.

Report profile

2.19 Significant changes in sustainability information measurement methods
Sustainability information measurement methods remain much the same as in the previous year, but the scope has been increased to more fully meet the requirements of the Global Reporting Initiative (GRI) guidelines. In particular, we moved toward the International Labour Organization (ILO) recommendations for accident reporting and issued an ABB Group Directive whereby all work-related fatalities and serious incidents worldwide are reported directly to the CEO within 24 hours.

Also the sustainability computerized data reporting format has been improved to achieve greater accuracy, with the use of help buttons to fully define the data required.

2.20 Policies and practices to enhance accuracy, completeness and reliability of the report
Data for the report is collected from each ABB site, consolidated and checked at the country level and again at the group level. At least once a year, the country sustainability controller audits the data from each site.

2.21 Independent assurance for the full report
Our triple bottom line sustainability performance, as reported in the GRI section, has been verified by independent external organizations. The data reported in the economic perfomance section (page 40) comprises unaltered extracts from ABB's annual report 2002, audited by statutory auditors Ernst & Young AG. The environmental and social sections (pages 41–48) have been verified by the independent verification body, Det Norske Veritas, whose statement appears on page 52.

2.22 Additional information on sustainability matters
Further and expanded information on ABB's sustainability performance is published on the ABB Group Web site under: www.abb.com/sustainability

Policies and management systems

ABB's sustainability policies

Our goal is to improve our social and environmental performance continuously, and to take initiatives that improve quality of life in the communities and countries where we operate.

We create value for society by:

- Joining initiatives that foster economic, environmental, social and educational development
- Offering our customers eco-efficient products that reduce environmental impact over their complete life cycles
- Sharing our state-of-the-art technologies with emerging markets
- Ensuring our operations and processes comply with applicable environmental standards and legislation. Specifically, every operating unit must implement an environmental management system that continuously improves its environmental performance
- Ensuring our social and environmental policies are communicated and implemented
- Working toward achieving best practice in occupational health and safety
- Favoring and motivating suppliers who have sustainability policies and systems similar to our own

ABB's environmental policy

Environmental protection is among ABB's top corporate priorities. We address environmental issues in all our operations.

ABB is a signatory to the ICC Business Charter for Sustainable Development and has adopted the 16 principles of the Charter as its environmental policy, which is published in full on ABB's Web site www.abb.com/sustainability

Social policy

ABB's commitment to good social performance is elaborated in the group's social policy, which applies to all employees, and is published in full on ABB's Web site www.abb.com/sustainability

Group function sustainability affairs

ABB's sustainability affairs organization is composed of nearly 500 people (corresponding to 100 man-years) in more than 50 countries, and governs ABB's sustainability management program relating to social, health and safety, and environmental performance. The team coordinates group-wide common effort programs with a present focus on "Access to Electricity," and commissions auditing programs to verify the ABB Group is in compliance with its sustainability commitments.

A total of 46 country sustainability controllers implement sustainability business plans within each country, covering environmental, social and communication policies, programs and procedures.

About 420 local sustainability officers are responsible for local environmental management programs in accordance with ISO 14001.

Some countries and facilities maintain additional environmental specialists to supplement the implementation of environmental management systems.

Supporting the country sustainability controllers in the implementation of ABB's occupational health and safety program is a network of occupational health and safety managers at facility level.

To integrate sustainability performance into product development, stewardship and project management, a sustainability liaison person is being placed in each ABB business area (BA).

A sustainability support group is also embedded in ABB's corporate research to develop and maintain sustainability tools and training such as life cycle assessment, life cycle costs and design tools, integrating the tools into daily BA activities, and to serve as a contact for external sustainability engagements (DANTES, CPM, UNEP etc.)

ABB has established a new stakeholder advisory panel to discuss sustainability issues with stakeholders as required.

3.13 Precautionary approach

ABB has put in place group-wide principles for the development of new products and projects. This precautionary approach is integrated into the GATE model, and requires documented assessment of the life-long sustainability impact of new products and projects at the development phase.

GATE tools include Life Cycle Assessment, and advice on how to reduce the use of restricted materials, and are also to be related to occupational health and safety and supply management.

See under product stewardship for more information on the GATE model.

3.14a Use of externally developed charters and principles

ABB subscribes to externally developed charters and principles for sustainability management. They include the ICC Business Charter for Environmental Management, which ABB has adopted as its environmental policy, and ISO 14000 standards and technical reports.

ABB has adopted ISO 14001 for environmental management systems; ISO 14025 for environmental product declarations; ISO 14040-45 for Life Cycle Assessment; and ISO 19011 for environmental auditing of organizations.

ABB has incorporated the principles of OHSAS 18001, the ILO guidelines on occupational health and safety management systems, and the ILO Code of Practice on Recording and Notification of Occupational Accidents and Diseases into its safety program.

ABB facilities are encouraged to produce integrated management systems for environment (ISO 14001), quality (ISO 9001) and occupational health and safety (OHSAS 18001). In 2002, the number of sites using integrated systems grew from 80 to almost 100. Some of these have been externally certified.

3.14b EMS to cover all employees
ABB is extending environmental management systems to cover employees in non-manufacturing facilities. During 2002, we developed a general system that will be tested at group headquarters in Zurich. The target is to introduce the system into all of ABB's non-manufacturing facilities during 2003 and 2004.

By the end of 2002, 475 manufacturing and service sites had implemented the ISO 14001 standard. For manufacturing and service sites, this is 98 percent coverage. The remaining manufacturing sites have recently joined the ABB Group, and implementation of ISO 14001 will be completed at them during 2003 or 2004.

One new country, Lithuania, joined ABB's sustainability program in 2002 and a country sustainability controller, Ineta Mensikovaite, has been appointed. In Lithuania we perform sales and take on full service responsibilities of customer plants.

3.14c Social management
An executive committee member is responsible for sustainability affairs throughout the group and for the worldwide implementation of ABB's social policy. Under his leadership, guidelines and performance measurement indicators are being prepared for each principle of the social policy. Six principles are already covered; the remaining guidelines will be completed during 2003.

3.14d Occupational health and safety
ABB has developed its own occupational health and safety management system, based on OHSAS 18001 and the ILO Guidelines on Occupational Health and Safety Management Systems. ABB has set a goal for all business units to have implemented the ABB OHS management system by the end of 2004. This will cover all activities including manufacturing, office work, construction projects and service.

3.15e Principal membership in industry and business associations
Listed below are some of the principal associations and initiatives with which ABB is involved in the area of sustainability.

Alliance for Global Sustainability
Business for Social Responsibility (BSR), U.S.
Chalmers University of Technology, CPM, Sweden
Global Village Energy Partnership, U.S.
International Organization for Standardization, ISO, Switzerland
Pew Center on Global Climate Change, U.S.
Transparency International, Germany
United Nations Global Compact, New York
World Business Council for Sustainable Development, Switzerland
World Energy Council, U.K.
World Wide Fund for Nature, WWF, Switzerland
CSR Europe, Belgium

For more details of these memberships, see page 50 and consult our Web site www.abb.com.sustainability

3.16f Policies for managing upstream and downstream impacts EMS in the supply chain
ABB's environmental management principles also apply to its main suppliers. ABB favors suppliers who are committed to improving their environmental performance continuously, and who are certified to ISO 14001 or its equivalent. See also page 20.

Product stewardship
To assess and continually improve the sustainability performance of new products, ABB applies its GATE model for all product development. The model contains steps in which sustainability performance, objectives and other parameters are assessed. For example:

Gate 0 (go ahead): initial sustainability assessment of a new product in view of existing product lines

Gate 1 (definition): identify sustainability aspects and related objectives

Gate 2 (planning): establish a sustainability plan to define necessary actions, responsibilities and reporting lines, Life Cycle Assessment, restricted materials list and recycling information

Gate 3 to 5 (execution): follow up and report on the sustainability plan

Gate 6 (hand over): hand over documents necessary for sustainability management of the product over its life cycle

Gate 7 (follow up): GATE model documentation is used to improve the product development process

3.17 Management of indirect impacts
See under environmental performance for information on the indirect environmental impact of our manufacturing processes.

3.18 Major changes in operations
See page 35 in the previous section 2 "Profile of ABB."

3.19 Programs and procedures related to sustainability performance

Priority and target setting
- ABB's objective is to apply the ISO 14001 principles to all employees. Today, about 80 percent of employees are covered by the standard.
- ABB's objective to reduce energy use continues. We use about 12 megawatthours (MWh) per employee for non-manufacturing and 32 MWh per employee for manufacturing, compared to 15 and 38 MWh respectively three years ago.
- The restricted materials list supports our objective to avoid using materials that may be harmful to the environment.
- ABB has set a goal for all business units to implement the ABB occupational health and safety management system by the end of 2004.

Policies and management systems

Programs for performance improvement

- Based on our priorities and targets, all country sustainability controllers have developed country-specific business plans to implement our sustainability priorities and targets.
- Sustainability Affairs is responsible for the regular review of the individual business plans.

Sustainability costs

ABB limits the accounting of sustainability to the cost of running the sustainability network, including personnel costs and the cost of developing sustainability tools, education and training.

This does not include costs related to improvement projects. For example, the decision to invest in a new manufacturing process is the result of integrating many decisions in addition to environmental considerations.

	US$ (thousands)
Group level	1,360
Country level	3,950
Site level	3,810
Business area level	liaisons

3.20 Status of certification

Country	Sustainability controller	Environmental specialist	2003 "ISO" sites
Argentina	Justo Gonzalez Litardo		3
Australia/New Zealand	Peter Kinsey		21
Austria	Petra Thanner	Erwin Wippel	0
Benelux	Joost Kuijpers		22
Brazil	Carlos-Roberto Hohl	Manoel Siqueira	6
Canada	Andre K Baby	Grazyna A Momot	7
China	Paul Chan	Shiwen Zheng	18
Colombia	Albert Tibavizco		2
Czech Republic	Frantisek Dobes		4
Denmark	Jan F Relster		22
Egypt	Hassan Sharawi		3
Estonia	Liis Raidma		4
Finland	Sakari Hakkarainen		29
France	Valérie Rimonteil		8
Germany	Udo Weis	Lothar Kinzig	36
Greece	Tonia Petrovits		2
Hungary	István Horváth		1
India	Sanjeev Nagpal		8
Indonesia	Vacant		0
Ireland	Tom O'Reilly		2
Italy	Antonio Giacomucci	Gianluca Donate	29
Japan	Masaru Uetsuka		2
Latvia	Visvaldis Lacis		2
Lithuania	Ineta Mensikovaite		0
Malaysia	Urs von Wartburg		1
Mexico	Alberto Aviles		1
Near East Region	Mahmoud Khoshman	Gary Foote	6
Norway	Nils Borstad	Ivar Bjorseth	35
Peru	César Fernández		1
Philippines	Vacant		0
Poland	Andrzej Brzozowski		10
Portugal	Joao Oliveira		1
Romania	Rares Lutia	Sabine Simon	1
Russia	Alexander Burov		5
Saudi Arabia	Abdalkareem Alhooshan	Gary Foote	1
Singapore	Emily Tan		3
South Africa	Clive Govender		7
South Korea	Kyeong-Hee Lee		1
Spain	Roberto Sellés		15
Sweden	Gunnel Wisén-Persson		77
Switzerland	Remo Kuery	Jakob Weber	25
Thailand	Pornchai Satheinsep		1
Turkey	Refik Can Erkök		2
United Kingdom	John Watson		24
U.S.	David Onuscheck		25
Venezuela	Alfredo Cabrera		2
		Total	475

Internal communication and training
The network of country sustainability controllers and local sustainability officers is used to communicate sustainability priorities and goals internally, and to identify sustainability training needs. During 2002, training focused on the social policy and health and safety issues and reporting on performance indicators.

Performance monitoring
Sustainability performance is monitored by an internal reporting system.

Local sustainability officers report on environmental performance in an annual report comprised of approximately 70 environmental indicators.

Country sustainability controllers report on social performance, including occupational health and safety, in an annual report using indicators related to social performance.

The reports, along with proposals for necessary actions, are presented to the executive committee.

The executive committee issued a directive in 2003 which requires any fatal or serious accident within ABB's jurisdiction be reported to the chief executive officer and other company officers within 24 hours.

Internal and external auditing
Although it is not an ABB Group directive that all environmental management systems have to be externally verified, nevertheless 84 percent of ABB facilities have appointed an accredited certification body to verify regularly how well they meet ISO 14001 standards.

Based on acquiring more than 400 certificates, we believe the benefits of external verification far outweigh the cost for most facilities. The process can, for example, help identify projects that may improve environmental performance and reduce cost at the same time. External verification also helps to keep the internal system up to date and aware of new legislation.

In addition, ABB's Sustainability Annual Report is verified by DNV, Det Norske Veritas, an independent verification body. The DNV audit includes verification of reports and indicators, and focuses on the Global Reporting Initiative guidelines for reporting on sustainability.

Country sustainability controllers also perform regular audits of sustainability performance at ABB sites. In general, every site is audited at least every third year.

Senior management review and governance
The head of sustainability affairs reports on ABB's sustainability performance to an executive committee member regularly. Fixed items on the agenda are: development of sustainability indicators; progress on sustainability objectives; new objectives and governance of matters related to sustainability.

Business ethics
Policy
Principle 13 of ABB's social policy commits ABB to uphold high standards in business ethics and to support efforts of national and international authorities to establish and enforce high ethical standards for all businesses.

The ABB Group subscribes to the basic principles in the International Chamber of Commerce (ICC) Rules of Conduct, 1999 revised edition, and the OECD Convention from 1997.

ABB's policy on business ethics belongs to the company's core set of values and guiding principles and is incorporated in ABB's mission and values statement, which is published in 23 languages and on our group Web site. It is also incorporated in ABB's business ethics standards, publicly available in ten major languages, which sets a "zero tolerance" ruling relating to non-compliance.

In implementing this policy, ABB management and employees undertake to:

- Recognize that ethical and economic values are independent, and that high business ethics and integrity ensure their credibility
- Insist on honesty and fairness in all aspects of their business and expect the same from their partners
- Ensure all ABB business transactions are fully and fairly recorded according to the company's accounting principles
- Undergo continuous training and awareness-raising sessions on how to handle ethical issues, and to provide timely advice and guidance
- Apply a "zero tolerance" regime in ensuring strict adherence to local and international laws and regulations, as well as to ABB Group ethical standards
- Regularly monitor ethical conduct and ensure that accessible systems are in place for employees or others to report potential violations

Global compliance support network
ABB's board of directors and executive committee have designated the group function – legal and compliance to implement and oversee business ethics within ABB and to manage a global network to ensure compliance.

Compliance officers and counselors have been appointed at group headquarters, in specific regions, and in more than 60 countries to advise and monitor employees in all parts of the organization. In addition, ethical coordinators have been established in the business divisions to identify critical issues and develop programs to address them. Another section on lenders and export credit agencies has been added to the business ethics policy. Specially trained compliance officers are responsible for certifying all necessary disclosures in this area.

This global network distributes information and guidance, fosters internal dialogue, and supports ethical education and training. During 2002, ABB continued a rigorous program throughout the group to promote its business ethics policy and ensure compliance. In the last few years, training programs covering approximately 50 percent of employees have been held in countries where ABB has major activities.

Access for employees
Employees have access via the group's global intranet to information, guidelines, documents, forms and useful agreements covering all aspects of the business ethics compliance program. Also provided are a 24-hour response helpdesk and details of the compliance counselor network for consultation or questions.

External liaisons
ABB is a group contributor and donor to Transparency International, the coalition against corruption. The ABB Group also liaises with the Basel Institute on Governance, and for several years ABB in Germany has cooperated with the Center for Business Ethics in Konstanz, Germany.

Economic Performance

ABB's economic performance in 2002

ABB took a series of measures to refocus its business and strengthen its financial position during a difficult year. One of the first steps to make the company more competitive was to streamline the number of divisions – from six to two – so that ABB now focuses on its Power Technologies and Automation Technologies divisions.

ABB also launched a program to cut its cost base by US$ 800 million by mid-2004, and carried out a series of divestments of non-core businesses, as part of measures to turn the company around. The divestments program is continuing in 2003.

About 30,000 ABB employees are expected to be transferred to other companies as a result of the divestments. An estimated 10,000 to 12,000 jobs will be cut in the cost savings program, leaving a workforce of just under 100,000 employees by mid-2004.

A greater level of financial flexibility was achieved through a new bank credit facility agreed in 2002, which covers the group's needs through 2004. ABB also achieved its net debt reduction target in 2002.

Overall net results were burdened by asbestos payments, losses in discontinued operations and non-core businesses, and costs from corporate activities.

On the asbestos issue, ABB and its U.S. subsidiary Combustion Engineering (CE) agreed early in 2003 on a pre-packaged bankruptcy plan for CE with representatives of asbestos plaintiffs. A U.S. bankruptcy court is considering the plan.

Targets for 2003 – 2005 have been set:

- Revenues: 4 percent growth in 2003; 4 percent annual average growth 2002–2005
- EBIT margin: 4 percent in 2003 and 8 percent by 2005
- Total debt reduction: to US$ 6.5 billion by end of 2003; to US$ 4 billion by year-end 2005

All figures in US$ millions unless otherwise stated

	2000	2001 restated	**2002**
Total revenues	19,355	19,382	**18,295**
Gross profit (revenues less cost of sales)	5,157	4,505	**4,526**
Gross margin (%)	26,6	23,2	**24,7**
Earnings before interest and taxes (EBIT)	1,173	157	**394**
Net income (loss)	1,443	(729)	**(783)**
Dividends (CHF millions)	900	0	**0**
Dividends per share (CHF)	0.75	0	**0**
Net operating assets / revenues (%)	59.8	55.4	**61.5**

Revenues by region

	2000	2001 restated	**2002**
Europe	12,104	10,852	**10,265**
The Americas	4,673	4,863	**4,101**
Asia	1,741	2,435	**2,603**
Middle East and Africa	837	1,232	**1,326**

Assets

	2000	2001 restated	**2002**
Total assets	30,962	32,305	**29,533**
Of which goodwill and other intangible assets, net	2,589	2,775	**2,912**
Market-to-book (%)	611.1	545.9	**310.6**

Investments

	2000	2001 restated	**2002**
Research and development expense	660	593	**550**
Order-related development expenditures	555	405	**249**
Capital expenditures, excluding purchased intangible assets	426	607	**460**
Capital expenditures for acquisitions	896	597	**154**
Net debt/equity ratio	0.34	1.98	**2.63**
Debt servicing capacity (EBIT/net interest expense)	17.51	0.70	**2.76**

ABB does not account for investments in human capital (such as employee training and community education).

Procurement

	2000	2001 restated	**2002**
Total value of goods and services (unaudited)	N/a	N/a	**8,200**

Labor productivity

US$ thousands	2000	2001 restated	**2002**
Revenue per employee	129.7	135.2	**143.9**

Taxes

	2000	2001 restated	**2002**
Tax expense from continuing operations	300	63	**83**

Number of employees

	2000	2001	**2002**
Number of employees	160,818	156,865	**139,051**

EC10 Donations to community, civil society and other groups

(See indicator SO1 on page 47)

Environmental performance

Overview

The sustainability report relates to all employees working in premises owned or occupied by ABB. Figures for about 20 percent of employees are estimated, the remaining 80 percent are based on collected data.

The estimates are limited to organizations with limited environmental impact, such as non-manufacturing organizations in countries that do not presently have a network of sustainability controllers.

Materials

EN1 Total materials consumption

The main materials used in ABB's products, by weight, are steel, sheet metal, copper, aluminum, mineral oil and various plastics. ABB's diverse range of standard products and the fact that many products are made to customer specifications means that aggregate reporting of materials consumption is not meaningful. ABB's corporate objective is to minimize the materials and substances used per product, especially those included in the official list of "restricted" materials.

Use of hazardous material

ABB follows or, in some countries, exceeds the standard definitions of hazardous materials and substances set by international agreements.

ABB's corporate objective is to phase out the use of these hazardous substances. Priorities for replacement depend upon the environmental safety and technical acceptability of alternatives; the risk of the substance escaping into the environment; how hazardous the substance is; and whether ABB or its customers can use the substance under strict control.

In these tables we list materials and substances used in ABB's production or by suppliers according to ABB's specification.

"Restricted" organic substances used in production (tons)

	2000	2001	**2002**
PVC resin – for cables and molding	1,382	1,043	1,084
Phthalates (DEHP, DOP) – softener for PVC 88	39	28	
Phthalates (DIDP) – softener for PVC	96	7	14
Organic lead – stabilizer in plastics	8	2	1
Chloroparaffin < C14 – softener/flame retardants	8	2	<1
Chloroparaffin < C14 – C17 – cutting fluid	<1	<1	<1
PBB and PBDE – flame retardants in plastics	n.acc.	n.acc.	104*
Insecticides – control of insects	<1	<1	<1
Fungicides – control of water fungi	1.3	3.5	4.8
Nonylphenoletoxylate – degreasing agent	<1	<1	<1
Polyurethane – coating, paints, adhesives	715	927	819
Epoxy (low molecular) – molded parts	117	424	296
Epoxy (high molecular) – coating, paints, adhesives	586	1,114	941

* As the scope of reporting has been increased to include flame retardants added by the supplier of the PVC compound, the figure is not comparable with the figures in previous reports.

"Restricted" metals and inorganic substances (tons)

	2000	2001	**2002**
Lead			
Submarine cables	2,974	1,500	**977**
Other products, e.g. counterweights in robots	2,780	2,037	**640***
In paint (customer specifications)	n.a.	n.a.	**0.03****
Cadmium			
Rechargeable batteries	1.0	2	**2.1**
In industrial batteries delivered to customers	n.a.	n.a.	**40*****
In lead alloy	2.5	3	**1**
CdO plating on contactors	<1	<1	**<1**
Mercury			
In products delivered to customers	0.032	0.027	**0.017********
SF_6 insulation gas (inflow to ABB facilities from the suppliers of the gas)	331	457	**374**
SF_6 insulation gas (outflow to customers)	301	403	**358**

* The reduction of lead used in counterweights for robots is because ABB now offers counterweights made of cast iron as an alternative to lead.

** For the first year we have collected the amount of lead used in paint for products delivered to customers. The ABB aim is not to use lead based paint for standard products and it is only when customers have special requirements that this type of paint is used.

*** The 40 tons of cadmium is for one customer installation in Fairbanks, Alaska. See separate case story on page 15.

**** The use of mercury in products delivered to customers has been reduced by the divestment of the metering business.

Products in use containing hazardous organic substances

	2000	2001	**2002**
No. of transformers with PCB oil	47	64	**38**
No. of capacitors with PCB oil	4,212	3,056	**3,003**
Mercury in welding machines (kg)	16	16	**0***
Mercury in measuring instrument for gas analysis of transformer oil (kg)	n.a.	n.a.	**28**

* The elimination of mercury used in welding machines is a result of the divestment of the air-handling business.

EN2 Percentage of waste materials used from external sources

The lead used as counterweights for robots, 640 tons, and the cadmium used in industrial batteries, 40 tons, are recycled by external sources.

Environmental performance

Energy

EN3 Direct energy use (Gigawatthours – GWh)

	2000	2001	**2002**
Primary fuel			
Oil (9.96 MWh/m^3)	150	165	**151**
Coal (7.56 MWh/ton)	45	24	**22**
Gas	533	624	**543**
District heat	304	318	**395***
Electricity	1,381	1,242	**1,744***
Total energy used	2,413	2,373	**2,855**
Megawatthours (MWh) per employee	21	20	**21****

*For 20 percent of employees, the figures include an estimation based on the use of 3 MWh/employee for district heat and 12 MWh/employee for electricity.

** The figure for 2002 covers a different scope and cannot be compared to previous years.

Due to a heterogeneous product mix and the fact that most of our products are made to customer specifications, we do not report energy consumption per unit of production. Instead, we monitor the use of energy per employee.

EN4 Indirect energy use (Gigawatthours – GWh)

	Use by ABB	**Losses at utilities**	**Total use of energy**
District heat	395*	62	457
Electricity	1,744*	2,408	4,152

*Includes an estimation for 20 percent of employees (see under energy use)

Indirect energy use is defined in this table as the energy losses incurred by the utilities in supplying ABB with the energy we consume. For example, to supply ABB with 395 GWh of useable district heating, the utilities consume 457 GWh of energy, incurring losses of 62 GWh. This provides a measure of the utilities' efficiency in providing ABB with useable energy – 87 percent for district heating, but only 42 percent for the supply of useful electricity.

EN17 Initiatives to use renewable energy

Most ABB facilities are bound to the energy mix supplied by utilities. In countries where utilities sell "green energy," ABB's objective is to increase the amount of renewable energy it buys. ABB in the Netherlands began buying "green" during 2002 to meet some of its energy needs, and a renewable energy initiative at ABB, Figeholm, in Sweden turned a mountain of sawdust into 147 tons of fuel briquettes.

EN18 Energy consumption footprint of major products

ABB publishes environmental product declarations (EPDs) for a growing number of core products. An EPD quantifies a product's environmental performance over its entire life cycle, based on a formal life cycle assessment according to ISO 14025 standard.

To date, about 50 EPDs have been published. They can be found on the sustainability pages at www.abb.com/sustainability

For a typical ABB product that needs energy to operate, such as a rotating machine, life cycle assessments show that by far the greatest environmental impacts are caused during its operating life rather than during its manufacture, as a result of the energy it consumes. In an ABB EPD, these impacts are presented as measures of contributions that the product makes to known environmental phenomena, such as global warming, ozone depletion, etc., as shown in the table below. An example of a typical pattern for an ABB product such as a direct current machine is:

	% from manufacturing	% from use
Global warming	0.08	99.92
Acidification	0.04	99.96
Ozone depletion	0.10	99.90
Formation of ground level ozone	0.30	99.70
Eutrophication	0.07	99.93

EN19 Other indirect energy use – travel as a percentage of total number of journeys

	Road		Rail		Air	
	2001	2002	2001	2002	2001	2002
Business traveling	55	55	8	9	37	36

The three means of travel, based on local estimates, have not changed significantly in relation to each other during 2002, but the total travel distance is significantly lower.

Use of energy-intensive materials

The total amount of all materials is not accounted. The most energy intensive materials used by ABB are: aluminum (284 mega joules per kilogram – MJ/kg), copper (128 MJ/kg) and steel (28 MJ/kg).

Life cycle management manufacturing

ABB's objective is to recycle as much self-generated scrap as possible. The total amount of solid scrap recycled is lower during 2002 because of divested manufacturing units.

Recycled scrap (tons)

	2000	2001	**2002**
Solid	107,650	106,998	**85,751**
Liquid	2,025	2,615	**5,746**

End of life

All major ABB products come with recycling instructions. In Finland and the United Kingdom, ABB has implemented "take-back systems" to encourage material recycling.

Water

EN5 Water consumption (kilotons)

	2000	2001	2002
Sanitary water and water for process cooling	6,044	5,390	**4,469***

* The figures show the amount of water bought from water companies. They Include an estimate of 10 tons/year/employee for approximately 20 percent of all employees.

EN20 Water sources significantly affected by use of water

ABB's manufacturing processes do not use significant amounts of water.

EN21 Annual withdrawals of ground and surface water

With the exception of surface water used for process cooling – which is pumped back to the water source – ABB does not withdraw ground or surface water for its operations. At ABB, Figeholm, in Sweden, surface water from nearby Lake Trästen is used in the manufacture of insulation paper for electrical machines. According to the permit for the site, ABB can withdraw 280,000 cubic meters of water per year, which would lower the water surface by one meter. During 2002, only 150,000 cubic meters were used for processes, with no environmental impact detected.

EN22 Recycling and reuse of water

The amount of water in closed loop processes is approximately 60,000 tons. The water is mainly used in cooling systems and for surface treatment processes.

Biodiversity

EN6 Land owned, leased, or managed in biodiversity-rich habitats

ABB's manufacturing units are not located in areas with biodiversity-rich habitats.

Emissions

EN8 Greenhouse gases (kilotons)

	2000	2001	2002
CO_2 from use of energy	964	910	**1,172***
SF_6 (in CO_2 equivalents)	385	501	**257**

* Includes 267 kilotons calculated with the same estimation as for "direct energy use."

Carbon dioxide (CO_2) emissions calculations are based on in-house energy use for production, lighting, heating and air-conditioning, and include indirect emissions at utilities where ABB buys power. Sulfur hexafluoride (SF_6) emissions are estimated to be equivalent to three percent of all gas used by ABB. The CO_2 equivalent for SF_6 is 23,900. The reduction in 2002 was due to improved leakage control.

EN9 Ozone-depleting substances (tons)

CFC class II	2000	2001	2002
Filled in customer products	30	25	**12***
Contained in own manufacturing processes	7	7	**4**
Contained in equipment for AC of own buildings	11	10	**8**

* Reduced by the divestment of air-handling equipment business.

Chlorofluorocarbon (CFC) class I is banned in ABB products and cannot be used to service customer installations. Some CFC class II is still used in air-conditioning equipment and to service customer installations, but ABB's objective is to phase this use out. All CFCs are handled according to procedures in each manufacturing site's environmental management program.

Volatile substances (tons)

	2000	2001	2002
VOC	1,261	1,204	**946**
VOC-Cl	157	143	**47***

* Reduced by the divestment of air-handling equipment business

The use of chlorinated volatile organic compound (VOC-Cl) will be phased out. ABB uses water borne paint as much as possible to further reduce emissions.

The current reporting system does not distinguish between the various types of VOC and VOC-Cl. It is, therefore, not meaningful to convert the data into ethane equivalents. The major constituents of VOCs and VOC-Cls are xylene, thinner and perchloroethylene.

EN10 Emission of NO_x and SO_x (kilotons)

	2000	2001	2002
SO_x from burning of coal	n.acc.	n.acc.	16
SO_x from burning of oil	n.acc.	n.acc.	109
NO_x from burning of coal	n.acc.	n.acc.	12
NO_x from burning of oil	n.acc.	n.acc.	82
NO_x from burning gas	n.acc.	n.acc.	137

These figures are for fossil fuels consumed in ABB premises for heating purposes.

EN30 Other indirect greenhouse gas emissions

Indirect emissions from traveling, transportation, manufacturing and emissions related to product use are not aggregated at group level.

For core products however, the greenhouse gas emission throughout a product's life cycle is shown in the environmental product declarations (go to www.abb.com/sustainability to see the EPDs).

EN11 Hazardous waste sent for disposal (tons)

	2000	2001	2002
Oil	n.acc.	n.acc.	**2,212**
PCB-contaminated oil and equipment	30	32	**202**
Sludge from paint booths	n.acc.	n.acc.	**686**
Wet paint	n.acc.	n.acc.	**314**
Volatile organic compounds	n.acc.	n.acc.	**177**
Others	n.acc.	n.acc.	**2,789**

This year for the first time ABB has accounted for major waste streams, rather than report on solid and liquid waste as in previous reports.

The significant increase of PCB-contaminated oil and equipment in 2002 is from the disposal of 33 PCB transformers in Australia.

EN31 Transport of hazardous waste

ABB's hazardous waste is transported and disposed of only by officially authorized disposal agents.

EN32 Water sources and related ecosystems significantly affected by discharges of water

ABB sites do not significantly affect water sources or ground water.

EN11 cont. Disposal methods for other non-hazardous wastes (in percentage of waste quantity)

	Recycling		Incineration		Landfill		Other	
	2001	2002	2001	2002	2001	2002	2001	2002
Wood	51	55	21	20	24	19	4	6
Plastic	30	40	19	17	49	37	2	6
Paper	78	75	6	7	15	15	1	3

The main waste streams at ABB organizations are wood, plastic and paper. The figures above are local estimates. ABB's objective is to reduce the amount of waste sent to landfills and increase recycling. However, in some countries proper waste recycling programs are unavailable.

EN12 Discharge of water to recipient (percentage of number of plants)

	2000	2001	2002
Public sewer	n.acc.	63	75
Water body	n.acc.	37	25

The water comes mainly from surface treatment plants, cooling water and test plants.

EN13 Spills and other incidents

ABB's environmental management program includes mechanisms for reporting incidents with potential environmental impact. During 2002, 29 such incidents were reported: 19 related to chemical spills; three fires; two malfunctioning wastewater treatment plants; four cases of legal non-compliance; and one road accident.

The table below contains examples of the types of incidents reported

Date 2002	Location	Description	Action taken
3 February	ABB Power Technology, Pitea, Sweden	Fire in dust extracting duct	A fire alarm system was installed
1 March	ABB Australia, Regents Park	Elementary mercury in drain on site	Historical impact (Hg has never been used by ABB on the site). Treatment system to remove the mercury was installed. Monitoring system installed.
24 April	ABB Guarulhos, Brazil	Leakage of 200 liters of mineral oil	Emergency services mitigated the impact. New surveillance system installed.
8 August	Varennes, Canada	Spill of approximately 5,000 liters of waste oil and/ or solvent from UGST via vent hole	Caused by a programming error of overflow alarm system. The spill was decontaminated by removal of impacted soil. Reprogramming of overflow alarm system.
3 October	ABB Power Technology, Steinkier, Norway	200 kg of transformer oil leaked	Local authority was informed and impacted soil was removed from the site.The procedure for oil filling was amended.

Transportation

EN34 Environmental impacts of transportation

Percentage of transportation, by type

	Road		Rail		Sea		Air	
	2001	2002	2001	2002	2001	2002	2001	2002
Materials from suppliers	77	78	6	5	9	8	8	9
Delivery of finished products	71	78	5	4	15	11	9	7

The figures above are local estimates. Most material from suppliers, as well as products from ABB to customers, is transported by road. ABB's objective is to reduce the amount of material shipped by road.

Suppliers

EN33 Performance of suppliers

Major suppliers of materials and services used directly in manufacturing ABB products must undertake the following:

- to implement an environmental policy
- to identify the significant environmental aspects of manufacturing the products they supply to ABB
- to ensure that all operations and processes comply with environmental standards and legislation
- to have in place the basic elements for continuous improvement, in particular those with ISO 14001 certification

Products and services

EN14 Significant environmental impacts of principal products and services

The environmental performance and impact of core products is accounted for in the environmental product declarations, EPDs. ABB has produced approximately 50 EPDs, available on www.abb.com/sustainability.

EPDs are produced in accordance with ISO 14025, the international standard for product declarations.

EN15 Percentage of ABB products reclaimable after use

ABB products contain mostly steel, copper, aluminum, oil and plastics. As many as 90 percent constitute valuable scrap, and are reclaimable when their lifetime is over.

ABB's objective is to encourage recycling by using special designs, and by telling customers how to recycle ABB products.

Compliance

EN16 Fines for non-compliance with applicable legislations

The following penalties for environmental infringements by ABB companies were reported during 2002:

Location	Description
Brazil	Pending fine from Minas Gerais state because of late renewal of environmental license
Sweden	Fine of US$ 1,000 for late registration of information about incident in 2001
Mexico	Fine of US$ 700 for missing registration of hazardous waste
Czech Republic	Fine of US$ 320 for breaking Czech law 157/1998 on the labeling of barrels

Social performance

Overview

ABB has devoted considerable time and effort in the past year to raising awareness within its network of 46 country sustainability controllers on the scope and implementation of its social policy. The controllers work to ensure that the policy's principles are implemented in each country, but still also pay close attention to local priorities.

Guidelines covering the implementation of the principles, backed by selected performance-measuring indicators, have been produced for six of the 13 principles; those for the remaining seven are to be completed during 2003. A steering group chaired by a member of the executive committee supervises the implementation process.

The scope of indicators to report our social performance has again been considerably increased in the past year to include many of the new indicators proposed by the Global Reporting Initiative (GRI). The GRI reference numbers are shown against each indicator.

Items without reference numbers cover areas beyond the scope of the GRI on which we reported last year and which we again document in this latest report.

Many of the indicators referred to are already covered in ABB's social policy, which is published in full on ABB's Web site www.abb.com/sustainability

Labor practices and decent work

LA1 Breakdown of workforce (numbers of employees)

	2000	2001	**2002**
Europe	104,532	101,962	**90,383**
The Americas	27,339	26,667	**23,639**
Asia	17,690	17,255	**16,686**
Middle East and Africa	11,757	10,981	**8,343**
Total	160,818	156,865	**139,051**

LA4 Information, consultation and negotiation with employees

Principle 6 of the social policy commits ABB to facilitate regular consultation with all employees to address areas of concern, and to make sure in case of major layoffs that a social benefits and guidance plan is in place and already known to employees or their official representatives.

All countries in ABB's sustainability management program were asked to confirm compliance and explain their procedures. A total of 26 out of 42 countries gave satisfactory answers. Various methods are adopted, including employee-management meetings, seminars, video/conference calls and intranet-based information forums.

LA5 Recording and notification of occupational accidents and diseases

Principle 5 of ABB's social policy commits ABB to provide a safe and healthy working environment at all its sites.

All countries are required to report immediately to the ABB CEO and group heads – and investigate – incidents that result in a fatality, serious injury, or a defined dangerous occurrence. They also have to establish procedures for the reporting and investigation, per business unit, of work-related accidents, lost days, and occupational diseases – including work-related travel incidents.

The general principles of the International Labour Organization (ILO) code of practice on recording and notification of occupational accidents and diseases have been followed in developing ABB's reporting and investigation process.

LA6 Description of formal joint health and safety committees

Health and safety consultation is an integral part of ABB's commitment to introduce occupational health and safety management systems based on OHSAS 18001 and the ILO guidelines into all business units. The form of health and safety consultation with employees varies according to local requirements, and includes health and safety committees, and employee forums.

LA7 Standard injuries, lost days, absentee rates and fatalities

Figures for employees are segregated into work-related and travel-related, and detailed in the following tables.

The incident rate is calculated as the number of incidents divided by the total number of employees, multiplied by 1,000.

Work-related

Accident type	2000 Total	2000 Incident rate	2001 Total	2001 Incident rate	2002 Total	2002 Incident rate
Fatal	2	0.019	2	0.014	2	0.016
Serious injury	475	4.49	517	3.54	95	0.78
Lost days	40,810	386	73,749	504	46,504	380

Commuting and business travel-related

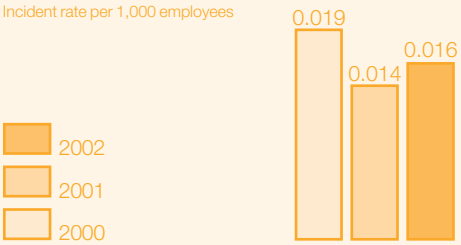
Accident type	2001 Total	2001 Incident rate	2002 Total	2002 Incident rate
Fatal	3	0.02	1	0.008
Serious injury	48	0.33	13	0.11
Lost days	21,845	149	2,602	21

Figures per empoyee are calculated based on 105,711 employees in 2000, 146,193 in 2001, and 122, 387 in 2002. The figures cover 40 countries, several of which still base their reporting on national requirements, making the figures less reliable. (See further comments under charts on next page).

Social performance

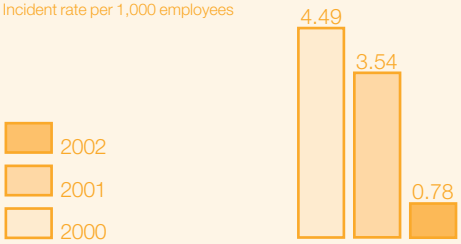
Fatal accident

Incident rate per 1,000 employees



Serious injury

Incident rate per 1,000 employees



The incident rate is calculated based on per 1,000 employees.

It is highly regrettable that two ABB employees died in work-related accidents in 2001. Both died from electric shock. As a result we have asked all business units to review their procedures for working with electricity, and we have introduced a new group standard for electrical work.

Another employee died in a road accident while on the way to work.

There were two fatal accidents involving ABB contractors during 2002.

Three ABB companies were also prosecuted for the contravention of national health and safety legislation.

In 2002 we moved towards the International Labour Organization (ILO) recommendations for accident reporting as part of our commitment to the Global Reporting Initiative (GRI). As a result, the definitions that we used for serious injury and lost time have changed this year. Instead of recording lost hours, we record full working days. This has contributed to the lower figures in 2002 compared to previous years. These lower figures also result from improvements in reliability of the data collection method since 2001. Moreover, the lower travel-related figures also reflect the much reduced business travel throughout the group during 2002 – for cost-cutting and security reasons.

LA8 Policies or programs on HIV/AIDS
All countries in ABB's sustainability management program were asked to give details of their activities in this area. A total of four out of 42 countries confirmed they had policies to address HIV/AIDS, and described their projects and initiatives.

LA14 Compliance with the ILO guidelines on occupational safety and health management systems
ABB has set a goal for all business units to implement the ABB occupational health and safety management system by December 2004. The ABB system follows the principles of OHSAS 18001:1999, and the ILO guidelines on occupational safety and health management systems.

LA9 Training and education
It is not cost-effective for ABB, operating in around 100 countries, to collect data on hours of training per employee per category. Instead we collect data on the total training expenditure per country as a percentage of personnel costs.

Most countries reported expenditure between one and three percent, but for others it was higher. For example, Finland recorded four percent, Ireland and Italy both five percent, and Saudi Arabia and Switzerland both ten percent. However, the figures are not comparable because a precise definition of what to include under "Training and Education" has not yet been developed.

LA10 Equal opportunity policies, programs and monitoring
Principle 7 of the social policy commits ABB to offer equality of opportunity to all employees.

Some countries run regular programs targeted at minority groups. In historically male-dominated engineering companies, such as ABB, women are also in a minority, but the proportion of women is steadily increasing, particularly in professional functions such as communications, sustainability, financial controlling, research and development.

LA11 Composition of senior management
ABB's board of directors comprises eight men of six nationalities.

The executive committee is made up of six men of five nationalities.

Percentage figures of women in senior executive, senior and middle management ranks in a selection of countries:

Greece	0
U.S.	0
South Korea	1
India	2
Spain	2
Ireland	6
Canada	8
Singapore	9
Czech Republic	12
South Africa	13
China	15
United Kingdom	15
Russia	16
Latvia	18
Finland	19
Turkey	20
Middle East region	23
Poland	30
Venezuela	31

(ABB has not yet developed definitions on which to collect this data. Therefore the figures are not directly comparable, but they reveal tendencies and regional variations.)

HR1 Policies, guidelines, procedures to deal with human rights in operations
Principle 2 of the social policy commits the group to support and respect the protection of internationally proclaimed human rights, including the United Nations Universal Declaration of Human Rights.

Guidelines have been produced for the implementation of this principle. They call for "screens" (checklists) to be produced of all relevant human rights principles, which could apply to ABB's operations in each country that ABB can influence directly.

HR2 Consideration of human rights impacts as part of investment decisions
One of the performance indicators used in ABB's implementation guidelines for Principle 2 comprises a checklist to investigate human rights impact as part of investment decisions in the country. For example, ABB has banned business operations in Myanmar because of the military government's human rights record.

HR3 Consideration of human rights impacts within the supply chain
Principle 11 of the social policy commits ABB to evaluate and select key suppliers and subcontractors on their ability to meet the requirements of ABB's social policy – including our human rights commitments in Principle 2.

ABB has incorporated social performance criteria, including human rights performance, into its suppliers' qualification process requirements.

The human rights performance of key suppliers forms part of ABB's screening and auditing procedures.

HR4 Policies to promote non-discrimination in operations
Principle 7 of ABB's social policy obliges ABB not to engage in or support discrimination in any form throughout its operations.

Guidelines covering the implementation of this principle, including the identification of performance indicators, are to be developed during 2003.

HR5 Policies to facilitate freedom of association
Principle 6 of the social policy commits ABB to respect the right of all personnel to form and join trade unions of their choice and to bargain collectively.

In countries where the law does not permit this right, Principle 6 obliges ABB to facilitate regular consultation with all employees to address areas of concern.

HR6 Policies to exclude child labor
Principle 3 of the social policy obliges the group to ensure that minors are properly protected and, as a fundamental principle, not to employ children or support the use of child labor.

ABB's focus is directed mainly at its supply chain by incorporating child labor criteria into its suppliers' qualification process requirements to ensure its key suppliers comply with the same principle.

HR7 Policies to prevent forced and compulsory labor
Principle 4 of the social policy requires that all employees enter into employment with ABB of their own free will.

ABB's focus is again directed mainly at its supply chain by incorporating criteria into its suppliers' qualification process requirements to ensure its key suppliers comply with the same principle.

HR9 Policies to facilitate disciplinary appeal practices
Principle 8 of the social policy commits ABB to develop and maintain equitable procedures to deal with employee grievances, and disciplinary practices.

Job satisfaction levels
Job satisfaction surveys were conducted in 2002 among ABB employees in 18 countries (out of 42 sampled). In general, results continued to show a positive trend. In Switzerland the average job satisfaction level increased from 90 to 91 percent in 2002, but in Sweden it fell from 71 to 68 percent. The most frequent criticism was that the working environment had worsened because of restructuring changes.

ABB's ranking as an employer
In 2002, ABB was ranked as an employer of choice in surveys in ten countries (out of 42 countries sampled) – in Australasia, Brazil, Denmark, India, the Netherlands, Finland (ranked 4), Hungary, Norway (ranked 18 – up from 68 in 2001), Sweden (ranked 4 for engineers), Switzerland (ranked 1 for engineers, up from 7 in 2001).

HR10 Non-retaliation policy and employee grievance system
In addition to Principle 8 of the social policy, which requires ABB to develop and maintain equitable procedures to deal with employee grievances, Principle 6 commits ABB to ensure that representatives of personnel are not subject to discrimination and have access to their members.

HR12 Policies to address the needs of indigenous people
The needs of indigenous people are generally covered by Principle 7 of ABB's social policy, which obliges ABB to offer equality of opportunity to all employees and not to engage in or support discrimination in any form.

ABB has additional policies in several countries to address this issue. In South Africa, for example, ABB pursues an affirmative action policy and a skills development policy for all employees who were disadvantaged before the 1994 democratic elections. In Malaysia, ABB's recruitment policy emphasizes the employment of bumiputras wherever possible, while maintaining a balance between the country's other three main races.

HR14 Revenues redistributed to local communities
In a recent project – the Kruger airport in South Africa, managed and owned by ABB – the local Mbuyane community were engaged in the decision-making process. They now have a ten percent share in the ownership of the new airport and receive a fee for each departing passenger. Further details can be found on page 19 .

SO1 Policies to manage impacts on communities
Principle 12 of ABB's social policy commits ABB to promote and participate in community engagement activities that actively foster environmental, social, economic and educational development of the communities where it operates.

In 2002, ABB companies in 35 countries supported community development, donating some US$ 5.5 million in funding and 21 man-years of employee participation.

Several examples are described as case stories on pages 16–19. Other examples included a US$ 200,000 sponsorship for social education programs for children in Brazil; test equipment and US$ 4,000 to build an electrical drives laboratory at Tallinn Technical University in Estonia; and employee and company donations of US$ 100,000, as well as 100 man-days in fund-raising events for the Macmillan Cancer Research in the U.K.; in Colombia, ABB employees act as godparents to ten children from very poor homes to support their education.

Overall, many initiatives for community development arise from ABB's worldwide program of stakeholder dialogue where preference is given to those which help the communities where ABB has its operations, while directly or indirectly supporting ABB's business aims. Stakeholder dialogues have been held in over 35 countries, while in Poland dialogues have been conducted in all the locations where ABB has operations.

Social performance

SO4 Awards received
In 2002, ABB received the Case EARTH environmental award for the environmental protection features incorporated in the Murraylink underground power line connection in Australia, described on page 14. ABB in Italy received an award for excellence in environmental communication; ABB in China won awards for its contribution to the development of Beijing and its research contributions toward greenhouse gas mitigation; in South Africa ABB won several awards for its support of the fight against crime, black empowerment, environmental care, social improvement and investment in the future.

SO2 Policies and compliance mechanisms addressing bribery and corruption
Principle 13 of ABB's social policy commits the group to uphold the highest standards in business ethics.

ABB also subscribes to the basic principles in the International Chamber of Commerce rules of conduct, 1999 revised edition, and the OECD Convention from 1997.

During 2002 ABB continued a rigorous compliance program worldwide to promote its business ethics policy, which is incorporated in our Vision and Mission statement published in 20 languages and on our group Web site. It is also incorporated in ABB's business ethics standards, available in 11 major languages, which sets a "zero tolerance" ruling for non-compliance.

SO3 & 5 Policies and compliance mechanisms for managing political contributions
In accordance with ABB's business ethics standards, contributions to political parties or committees, or to individual politicians, are not allowed in principle. Any exceptions, for countries whose cultures call for such practices, have to be cleared in advance with the ABB Group legal affairs and compliance department.

SO7 Policies and compliance mechanisms to prevent anti-competitive behavior
In accordance with ABB's business ethics standards, ABB is committed to fair and open competition in markets around the world and would take immediate steps under its "zero tolerance" ruling to address any incidents of non-compliance among its employees or other actions which restrict or distort competition in violation of applicable anti-trust laws. (See page 39 for information on ABB's business ethics policy and standards).

PR1 Policy for preserving customer health and safety during use of products
A total of 14 out of 42 countries sampled commented on the impact of ABB products, which generally help improve users' health and safety, for example by improving industrial environments (automation control products), reducing exposure to aggressive and hazardous operations (robotics), and reducing potential explosion and fire risks (oil-free transformers).

Products with a potentially negative impact are those which could leak SF_6 gas (contributing to global warming), require deforestation (transmission lines), and have the potential to cause electrocution if misused.

ABB in Germany pursues a program of role-reversal, where ABB managers exchange jobs with customer managers to experience customer demands at first hand. Health and safety issues are part of this program.

As part of its Industrial IT offering, ABB has developed an "IT Safe" sensoring module which distributes online health and safety instructions to users' operating staff.

A key responsibility of our business area liaison personnel is to focus on the environmental and social performance of our products and projects, including their health and safety impact.

PR2 Policy related to product information and labeling
ABB has been pursuing a pioneering goal to produce environmental product declarations for all its core products. These declarations take a life cycle approach and are based on assessments carried out in accordance with ISO standard 14025. They describe and quantify the environmental impact and performance of ABB products over all phases of their life cycles, covering material extraction, component manufacture, transportation and use over the full operating lifetime. They also contain recovery, recycling and disposal instructions when the product has completed its useful life.

To date, ABB has prepared 50 environmental product declarations. The work is very much in line with the European Union's new directive on the handling of waste electrical and electronic equipment.

PR8 Policy and compliance mechanisms related to customer satisfaction
Most ABB companies carry out customer surveys every one to three years, depending on the nature of their businesses. They are often undertaken by external agencies.

Several companies routinely use questionnaire surveys with the delivery of a product or execution of a project.

Furthermore, ABB captures, validates, tracks and analyzes all customer complaints in a single, global system that helps resolve problems quickly and efficiently. This system gives us a basic indicator of customer dissatisfaction (and, by inversion, customer satisfaction). It also provides valuable pointers for improvement.

PR9 Policies and compliance mechanisms for adherence to advertising standards and codes
Since ABB works in the field of advanced technologies and does not provide consumer products or services, this has not been an issue up to now. The responsibility for ensuring compliance with advertising standards and voluntary codes on a worldwide scale is assigned to ABB's corporate specialist advertising agencies that are qualified to perform these checks.

ABB in the sustainability performance ratings

High rankings in reputable sustainability performance indices translate into tangible customer benefits and distinguish ABB from many of its competitors.

Dow Jones Sustainability Indices (DJSI)

Launched in 1999, the DJSI was the world's first index comprising companies with superior sustainability performance, including economic, environmental and social aspects.

From the start, ABB ranked top in its industry group in the global Sustainability Group index. In 2002 ABB slipped to equal second place in its industry group due to shortcomings in corporate governance and financial soundness at the time and adverse media reporting. Nevertheless, ABB was cited as having an excellent overall sustainability performance and outstanding performance in the social dimension compared to its industry average.

FTSE4Good

The FTSE4Good indices were launched in July 2001 to highlight the best performers in corporate social responsibility. In 2002, ABB was one of some 250 companies in the FTSE4Good Europe Index and featured in the FTSE4Good Global Index.

Business in the Environment (BiE)

Business in the Environment (BiE) is the business-led campaign for corporate environmental responsibility, which launched the annual Index of Corporate Environmental Engagement in 1996 to assess companies' environmental performance.

ABB first participated in the BiE Index in 2000 and immediately topped the General Industrial economic group: overall it ranked 22nd out of 184 companies, increasing its ranking in 2001 to 14th out of 206 companies.

In the latest ranking for 2002, ABB moved into the top ten companies out of 207, and maintained its position at the top of the General Industrial Group with a score of more than 95 percent, well ahead of its nearest competitor. ABB was cited as scoring especially well in environmental management, with big improvements in stakeholder communication and the supplier program.

Sarasin Bank

The Sarasin Bank, based in Basel, Switzerland, assesses selected companies' environmental and social performance as a service for its clients.

In the latest assessment for 2002, ABB again scores above the industry average for every aspect of environmental performance. On the social side it scores well in several categories, but is penalized for anti-trust investigations, several changes in the business strategy, massive workforce reductions and excessive pension payments to former CEOs.

Swedish Environment Fund

In 2002, ABB was ranked among the top 50 most sustainable corporations quoted on the Swedish stock exchange. The list is a joint venture between Banco Funds, which administrates the Swedish Environment Fund, and The Natural Step Foundation.

Innovest

Innovest Strategic Value Advisors, headquartered in New York, has renewed its environmental statement for ABB's 2002 Sustainability Report as follows:

"ABB is employing a far-reaching and sophisticated approach to environmental management relative to sector competitors. As a result, ABB is more likely to generate greater returns, reduce risk and increase overall shareholder value. ABB's emphasis on process innovation, life cycle management and performance tracking indicate a high level of technical control and strategic planning. Its cradle-to-grave life cycle approach to environmental performance, including the recycling of electrical and electronic equipment, means that ABB is prepared well in advance of pending regulatory requirements. Advances in power distribution concepts, wind technology and other products with environmental benefits positions ABB to have first company advantage as demand for these products increases."

Outlook 2003 and 2004

Corporate

Our priority is to consolidate ABB's strong sustainability achievements as confirmed by external ratings, and sharpen the group sustainability focus. The stakeholder advisory panel will play a key role in this process. Special tools integrated into pre-tender project assessments will limit sustainability risks and enhance sustainability performance. Skills development within the group will include a focus on social and environmental issues.

Economic dimension

Our priority is to help bring ABB into profitability as soon as possible. We will start to describe and quantify ABB's economic impacts in selected developing countries.

Social dimension

The way in which we implement our social policy is guided by regular stakeholder dialogues at country or local levels. All business units will have a formal occupational health and safety management system in place by the end of 2004, covering manufacturing, office work, construction projects, and service. ABB's social policy will be integrated into the supply chain, and a new key supplier risk assessment model will be introduced.

Environmental dimension

Efforts continue to embed sustainability into product and project development through design for the environment (DFE) tools, including Life Cycle Assessment (LCAs) and the sustainability requirements in ABB's GATE model – mandatory for all new product development.

An environmental management system (EMS) to ISO 14001 will be in place at all manufacturing sites, and an adapted EMS at all non-manufacturing sites.

Common efforts

ABB supports the United Nations Global Compact and the least developed countries (LDC) program. ABB's Access to Electricity projects will be implemented in several countries and introduce technical solutions to rural electrification. To encourage this, strong partnerships with industries in other segments and organizations will be further developed.

Principal memberships

3.15 Principal memberships
Listed below are some of the principal associations and initiatives with which ABB is involved in the area of sustainability.

Alliance for Global Sustainability
Formed in 1994 by the Massachusetts Institute of Technology, the Swiss Federal Institutes of Technology, and the University of Tokyo, to work on integrated aspects of environmental and sustainability problems through research, education and global outreach. Chalmers University of Technology, Gothenburg, Sweden, recently joined the alliance. ABB serves on the management board of the alliance and has led its largest program to date – the two-year China Energy Technology Program, which was completed in 2002.

Business for Social Responsibility (BSR), U.S.
ABB is a member of the Business for Social Responsibility (BSR), which is a global organization that helps member companies achieve success in ways that respect ethical values, people, communities and the environment. BSR member companies represent nearly $2 trillion USD in combined annual revenues and employ more than six million workers around the world. Members gain access to research, education and training programs, consulting and practical guidance on all aspects of corporate social responsibility.

Centrum för Produktrelaterad Miljöanalys (CPM), Chalmers University of Technology, Gothenburg, Sweden
CPM is a national competence center, dedicated to sustainable product development. It is jointly funded by industry, VINNOVA (the Swedish Agency for Innovation Systems), and Chalmers. ABB is a board member.

Global Village Energy Partnership (GVEP), U.S.
The partnership was formally launched at the United Nations World Summit on Sustainable Development at Johannesburg in 2002. The World Bank and the UNDP are important drivers behind the initiative. The intention is to build a broad coalition to facilitate provision of modern energy services to the 1–2 billion people who lack access. GVEP addresses both urban and rural populations and will focus on action plans, knowledge exchange, capacity development, financing facilitation, and results monitoring. ABB is a registered partner in GVEP. (www.gvep.org)

International Organization for Standardization (ISO), Geneva, Switzerland
Responsible for standardization in all fields except electrical and electronic engineering. ABB's corporate staff for sustainability affairs is a member of Technical Committee 207.

Pew Center on Global Climate Change, U.S.
ABB is one of nearly 40 companies on the Business Environmental Leadership Council. The Pew Charitable Trust established the organization in 1998 to bring together "ingenuity and experience of all sectors of our society – private, public, and non-governmental organizations" to address global climate change constructively. By recognizing that solutions must be cost effective, equitable and allow economic growth, the Pew Center is addressing this issue by bringing leaders of business together to review proposals and debate issues.

Transparency International, Germany
The global non-governmental organization, founded in 1993, dedicated to fighting corruption. The movement consists of over 80 national chapters which seek to build coalitions among civil society, government and business to promote constructive initiatives to enhance transparency in government and in public sector institutions, to strenthen institutions to be more effective in curbing corruption, and to build public awareness and support of anticorruption actions. ABB is a group contributor and donor. (www.transparency.org)

United Nations Global Compact, U.S.
ABB was one of the 50 companies that supported the inaugural launch of the Global Compact in New York in July 2000. The Compact is a platform for encouraging and promoting good corporate practices and learning experiences in the areas of human rights, labor and the environment.

World Business Council for Sustainable Development, Switzerland
Established in January 1995, the WBCSD (of which ABB is a member) is a coalition of 150 international companies drawn from more than 30 countries and 20 major industrial sectors, and united by a shared commitment to sustainable development via the three pillars of economic growth, ecological balance and social progress.

World Energy Council, U.K.
A non-governmental energy-policy forum founded in 1923. Its objective is to promote the sustainable supply and use of energy for the greatest benefit of all. ABB provides the chairman of the steering committee for its Greenhouse Gas Emissions Reduction Program.

World Wide Fund for Nature (WWF), Switzerland
One of the world's largest and most effective organizations devoted to the conservation of nature, operating in around 100 countries and supported by nearly five million individuals. ABB started three joint projects with the WWF during 2001: on cogeneration in Europe, clean energy in Poland and the sustainable use of the resources of the Mekong river.

CSR Europe, Belgium
Corporate Social Responsibility Europe, founded in 1997 by its current president Etienne Davignon, is a network of 50 multinational companies whose aim is to plan, inform, and develop social sustainability activities. ABB serves on the Board of Directors and is actively involved in several of the organization's activities, such as the CSR Europe Academy, Lifelong Learning, Diversity, and the European framework on CSR.

Position statements

ABB's position on climate change and global warming

The United Nations' Intergovernmental Panel on Climate Change believes man-made emissions of greenhouse gases – mainly carbon dioxide – are influencing the global climate. In the Kyoto Protocol, signed by 173 governments in 1997, industrialized countries agreed to cut their greenhouse gas emissions.

ABB shares the UN's concern about global warming and is committed to the pursuit of emission reductions. We regard the Kyoto Protocol as an important initial step in lowering greenhouse gas emissions and stabilizing global temperatures.

At the international congress of the World Energy Council (WEC) in September 1998, ABB initiated a global project to reduce greenhouse gas emissions by one billion tons annually by 2005. Progress is publicly reported on the WEC Web site in a database of identified greenhouse gas reduction projects worldwide. The one billion ton target has been reached and raised to two billion tons.

In 1999, we set a target to reduce ABB's own greenhouse gas emissions by one percent per year over the next five years.

ABB's greatest contribution is through the high environmental performance of its products over their complete life cycles.

Using life cycle assessments, ABB delivers products and systems that require less material, have higher efficiencies and consume less energy, which means fewer greenhouse gas emissions – particularly over long operating lifetimes.

Applying ABB's advanced industrial information technology for the control of integrated systems, electrical power grids, industrial processes and buildings, can reduce emissions even further.

ABB's position on sulfur hexafluoride (SF_6)

Sulfur hexafluoride (SF_6) is a man-made gas used in electrical switchgear and installations and one of the most potent greenhouse gases listed in the Kyoto Protocol.

SF_6 gas has a global warming potential some 23,900 times greater than carbon dioxide (CO_2), but only minute amounts escape into the atmosphere.

Switchgear manufacturers use SF_6 gas to make safe, reliable and compact installations for power transmission and distribution companies.

ABB uses SF_6-based technology in high-voltage electrical equipment because of its excellent insulating and arc-quenching properties.

Accidental SF_6 gas emissions due to mistakes during manufacturing, installation, maintenance and decommissioning are a bigger problem than leaks. ABB's gas-handling procedures prevent emission and safeguard recyclability.

ABB's product-based life cycle assessment indicates that if handled correctly, the advantages of SF_6 gas outweigh the environmental impact of leakages.

ABB products contain SF_6 gas in closed systems, usually sealed for life. Current leakage guarantees range from 0.5 to 0.1 percent per year, and next generation products steadily improve leakage performances.

ABB has strict tracing and inventory systems and efficient handling procedures in place for dealing with SF_6 gas, in line with the recommendations of environmental agencies.

ABB supports and contributes to SF_6 emission reduction programs, and plays a leading role in international organizations that develop guidelines for SF_6 gas, including CIGRE, CAPIEL and NEMA.

ABB also takes back old SF_6-based products for dismantling and recycling under controlled conditions.

ABB is continuing to conduct research into alternatives to SF_6 gas, and makes SF_6-free products available whenever feasible.

ABB's position on WEEE and ROHS

The European Union's directives on Waste Electrical and Electronic Equipment (WEEE), and the Restriction of Hazardous Substances (ROHS), came into force on February 13, 2003.

All EU member states must incorporate these directives into national law by August 2004, and have take-back systems in place by September 2005.

The WEEE directive sets criteria for collection, treatment, recycling and recovery of waste electrical and electronic equipment. It makes producers responsible for financing most of these activities, so that private householders can return old electrical and electronic equipment without charge.

The ROHS directive controls recycling of waste electrical and electronic equipment by restricting the hazardous substances used in their manufacture, such as lead, mercury, cadmium, hexavalent chromium, and flame-retardants used in plastics: poly-brominated biphenyls (PBBs), and poly-brominated diphenyl ethers (PBDEs).

To meet the ROHS directive, materials used in some ABB products are being reviewed. ABB research centers are working to reduce future recycling costs of ABB products by reducing the need for special handling.

ABB's corporate supply management is also reviewing supplier qualification requirements to take the directives into account. Production of type III environmental product declarations describing and labeling the content, performance, recycling and disposal of ABB's core products will be accelerated.

ABB will take into account all relevant legislation and guidelines when designing products to facilitate the dismantling, recovery and recycling of its products.

Statement by Det Norske Veritas

Scope and method of work

DNV has been engaged by ABB to verify the ABB Group Sustainability Report 2002, covering the environmental and social performance data, including occupational health and safety, presented on pages 41–48 in this report.

As a part of the verification process we have:

- Interviewed personnel at ABB sustainability affairs having the responsibility to collect, aggregate and present the data in this report, and relevant key personnel from other Group Functions
- Conducted desktop studies of central documents referred to in the report
- Conducted phone interviews with selected local sustainability officers and country sustainability controllers
- Visited selected ABB sites to closely investigate the data gathered and reported from the sites
- Assessed the reporting system and conversion factors used in the reporting system and claims made on the basis of the reported data.

Our verification is based on spot checks and the information made available to us.

Conclusions

Based on our investigation we have found strong indications that the information presented on pages 41–48 in this report does give a balanced and accurate view of ABB's sustainability performance in 2002.

We see that in 2002 ABB has moved even closer to the GRI Guidelines. ABB's reporting is now converging on all the GRI core indicators, and we find that the reasons given for omitting certain indicators are sound. There is room for improvement mainly in the reporting of the full range of requirements within each GRI indicator (e.g. for the social dimension by increased reporting based on the breakdown of the workforce, and by displaying the results of monitoring).

ABB has a global Web-based reporting system, enabling an automatic and accurate aggregation of the data reported from each site or country. ABB's long-standing worldwide focus on environmental issues seems to be reflected in the high reliability of the monitored and reported environmental performance. We have found that good progress has been made on improving the maturity and reliability of reported social, and occupational health and safety performance.

We have also assessed the conversion factors used in the reporting and aggregation systems, and have not found any systematic or major mistakes.

However, based on our spot checks we have seen that a few indicators presented have a lower reliability. This is caused either by a lack of formal systems for data gathering (at sites or in countries), different interpretations of indicators between the countries, or when definitions are not forthcoming from the GRI, or still not developed by ABB. In cases where formal systems for data gathering are missing, the reported values from the sites were to a large degree local estimates, based on the professional judgement of the respective sustainability controllers or officers. These weaknesses have, however, been stated by ABB in its report.

Iain M. Light
Chief Operating Officer
Det Norske Veritas

Jon Jerre
Project Manager
DNV Consulting

Glossary

This glossary contains terms used in this report. A more comprehensive glossary of terms relating to environmental and social performance can be found in the sustainability section of the ABB Web site.

www.abb.com/sustainability

Acidification. Chemical alteration of the environment, resulting in hydrogen ions being produced more rapidly than they are dispersed or neutralized. Occurs mainly through fallout of sulfur and nitrogen compounds from combustion processes. Acidification can be harmful to terrestrial and aquatic life.

Air pollution. Accumulation in the atmosphere of substances that, in sufficient concentration, endanger human health or produce other measurable effects on living matter and other materials. Major pollutants include **carbon dioxide**, carbon monoxide, hydrocarbons, **nitrogen oxides**, particulates, sulfur dioxide, and photochemical oxidants, including **ozone**.

Asbestos. The name of certain silicate minerals when they occur in fibrous form. Asbestos fibers can be processed into materials that are uniquely resistant to fire, heat, and corrosion. However, asbestos's extremely fine fibers are easily inhaled, and exposure to them over a period of years has been linked to cancers. The manufacture, use, and disposal of asbestos are strictly regulated in most countries.

Biodiversity. The totality of genes, species and ecosystems in a region or in the world.

Business ethics. Moral principles concerning acceptable and unacceptable behavior by corporations and individual business people. Corporate executives are obliged to maintain a high sense of values and conduct honest and fair practices with all stakeholders.

Cadmium, Cd. A cumulatively toxic element used in the manufacture of batteries, for electroplating, in alloys (such as lead alloys), and in circuit board contacts.

Carbon dioxide, CO_2. A colorless gas that occurs in the atmosphere as part of nature's cycle. Human activities, especially the burning of fossil fuels, can increase levels of carbon dioxide in the atmosphere, which is believed to affect the climate. Carbon dioxide is the primary greenhouse gas on account of the high volumes released.

CFCs. See **Freons**.

Chloroparaffins or chlorinated paraffins. Highly complex and stable organic compounds containing chlorine. Resistant to degradation and oxidation. They are used as softeners in plastics and rubber, as flame-retardants and as components of cutting fluids in metal working. Harmful primarily to aquatic life.

Climate. The average weather (usually calculated over a 30-year time span) for a particular region and period. Climate is not the same as weather; rather it is the average pattern of weather for a particular region. Weather describes the short-term state of the atmosphere.

Climate change or global climate change. Sometimes used to refer to all forms of climatic inconsistency; in other cases used as a synonym for **global warming**.

Corporate governance. The system by which business corporations are directed and controlled. The governance structure specifies the distribution of rights and responsibilities among different participants (such as the board, managers, shareholders and other stakeholders), and spells out the rules and procedures for making decisions on corporate affairs.

Due diligence. Environmental due diligence refers to the targeted environmental screening of a company and provides an opportunity to identify and evaluate the environmental risks that could have a material impact on a merger, acquisition or divesture.

Eco-efficiency. The combination of efficiency and ecological aspects in the pursuit of sustainable development. An environmental management program is an instrument for achieving eco-efficiency.

Ecotoxicity. The potential of a substance to harm ecosystems. Usually refers to the toxic effect on aquatic organisms based on maximum tolerable concentrations.

Emission. Release or discharge of any substances (usually effluents or pollutants) into the environment.

Environmental aspects. Elements of an organization's activities, goods or services that can affect the environment.

Environmental impact. Any change to the environment, whether harmful or beneficial, resulting from an organization's activities, products, or services, or from human activities in general.

Environmental management system (EMS). A documented set of rules, processes etc. by which an organization runs its environmental policy. One of the main requirements for certification to ISO 14001.

Environmental performance. The measurable results actually attained by an organization through its environmental management system(s).

Environmental product declaration (EPD). A description of the aspects and impacts of a product, system or service over its entire life, from raw material extraction, through manufacturing and use, to end-of-life disposal or recycling.

Epoxy. A group of synthetic resins used in the manufacture of electrical insulating materials, adhesives, coatings and structural laminates. Low-molecular-weight epoxy resins may be skin sensitizers.

Eutrophication. Nutrient enrichment of bodies of water by nitrates and phosphates from organic material or surface runoff. This stimulates the growth of aquatic plants and can cause algal blooms that deoxygenate water and smother other aquatic life.

Fossil fuels. Hydrocarbon-based fuels formed by the decomposition of (mainly prehistoric) flora and fauna. Examples include oil, natural gas, coal, tar sands and peat.

Freons. Also known as chlorofluorocarbons (CFCs), this is a group of halogenated hydrocarbons: hydrocarbons whose molecules have one or more hydrogen atoms replaced by halogens (chlorine and/or fluorine). Formerly used widely as coolants, and expanding agents in insulation foam. As they contribute to depletion of the ozone layer and the greenhouse effect, their use is now banned in many countries.

GF–SA (Group Function-Sustainability Affairs). ABB's central sustainability staff, which reports directly to an Executive Committee Member and is responsible for running ABB's sustainability management program.

Global Compact (UNGC). A United Nations-sponsored platform for encouraging and promoting good corporate practices and learning experiences in the areas of human rights, labor and the environment. Its principles derive from the Universal Declaration of Human Rights, the International Labor Organization's fundamental principles on rights at work, and the Agenda 21 principles on the environment and development.

Global Reporting Initiative (GRI). The Global Reporting Initiative is an independent institution that develops and disseminates globally applicable Sustainability Reporting Guidelines. The Guidelines are for voluntary use by organisations for reporting on the economic, environmental, and social dimensions of their activities. The GRI is an official collaborating center of the United Nations Environment Programme (UNEP) and works in cooperation with the UN Global Compact. (www.globalreporting.org)

Global warming. The increase in the Earth's mean temperature that is, or is believed to be, occurring as a result of human activities affecting the Earth's atmosphere.

Global warming potential (GWP). An index that shows the relative effects of various **greenhouse gases** in increasing global warming. GWPs are calculated as the amount of infrared radiation absorbed by one kg of a gas over a period of 100 years. The GWP of carbon dioxide is one; the GWP of sulfur hexafluoride is 23,900.

Glossary

Greenhouse effect. The effect on the Earth's surface temperature of certain variable constituents of the lower atmosphere. The greenhouse effect keeps surface temperatures at a global average of around 15°C; in its absence, the global average would be below freezing. Environmental scientists are concerned that increases in the atmosphere's content of **greenhouse gases** (principally CO_2), caused by human activities, could have a dangerous warming effect on the Earth's atmosphere.

Greenhouse gases. Gases that contribute to the greenhouse effect and global warming. The most significant are **carbon dioxide** (CO_2), water vapor (H_2O), methane (CH_4), nitrous oxide (N_2O), **freons** (CFCs), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and **sulfur hexafluoride** (SF_6).

Hazardous waste. Waste requiring special disposal techniques. Definitions, regulations, and national standards vary from country to country.

IGBT. The Insulated Gate Bipolar Transistor is a power semiconductor-based switching device that combines two attractive properties. It has excellent fast switching capabilities and very good current conduction properties. The IGBT's area of application continues to increase.

International Chamber of Commerce (ICC). A nongovernmental organization founded in 1919 to promote trade, investment and the free market system. The ICC helps the international business community develop solutions for environmental problems, while striving to ensure that intergovernmental organizations concerned with the environment consider business views.

ISO 14000. A series of international standards covering various environmental issues. They include ISO 14001, which specifies environmental management systems; and ISO 14040, which covers life cycle assessment.

Kyoto Protocol. A legally binding agreement under which industrialized countries will reduce their collective greenhouse gas emissions by 5.2 percent. The agreement was reached in Kyoto on December 11, 1997, and has been amended in subsequent rounds of negotiation. It is now in the process of ratification.

Lead, Pb. A metallic element used in many industrial processes. Accumulates in biological systems and is linked to behavioral change, paralysis and blindness.

Least-developed countries (LDC). Forty-nine countries are currently designated by the United Nations as least-developed countries (LDCs). The list is reviewed every three years by the Economic and Social Council (ECOSOC). The criteria underlying the current list of LDCs are a low income, weak human resources, and a low level of economic diversification.

Life Cycle Assessment (LCA). A management tool for appraising and quantifying the total lifetime environmental impact of a product or activity, by analyzing the entire life cycle of the materials, processes, products, technologies, services or activities it involves. Life Cycle Assessment has four components – goal setting, inventory analysis, impact analysis and interpretation analysis.

Mercury, Hg. A heavy metal used in catalysts, instruments and in the paper industry, and released by the combustion of fossil fuels. Organic mercury compounds, such as methyl mercury, act as cumulative poisons that affect the nervous system.

Nitrogen oxides, NO_X. Nitrogen forms a number of oxides such as nitrogen dioxide (NO_2), nitric oxide (NO) and nitrous oxide (N_2O). Human activities, primarily industrial processes and burning of fossil fuels, release large amounts of nitrogen oxides into the atmosphere. They contribute to acidification, eutrophication and the formation of smog and ground level ozone.

Nonylphenoletoxylates. Complex hydrocarbons used in industrial cleaning and degreasing, paint manufacture and cutting fluids. May be harmful to aquatic life.

Occupational Health and Safety management system (OHSMS). A documented set of rules, processes, etc. by which an organization runs its OHS policy.

Ozone, O_3. A form of oxygen with three oxygen atoms in its molecules. The upper atmosphere's ozone layer protects life against harmful ultraviolet radiation, while ground level ozone is a pollutant that is harmful to plants and animals, and can cause breathing disorders.

Phthalates. Salts or esters of the aromatic hydrocarbon phthalic acid group. Used as softeners in plastics. Up to half the weight of PVC can consist of phthalates. It is suspected that phthalates diffusing into the environment might harm living creatures' capacity for reproduction.

Polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs). Biologically persistent organic compounds containing bromine. They are used as fire and flame retardants in plastics, for example in housings for electrical equipment. Their negative aspects are similar to those of **PCBs**.

Polychlorinated biphenyls (PCBs). A group of biologically persistent organic compounds containing chlorine, PCBs are toxic to marine life. Formerly widely used in electrical transformers and capacitors for their insulating and fire-resistant properties, they are now being phased out and disposed of.

Polyurethane. A group of polymers used in products ranging from shoe soles to furniture upholstery, and from insulation foams to coatings, paints and adhesives. Some isocyanates used in the production of polyurethanes may cause allergic reactions and asthma. Polyurethanes are relatively stable compounds, but when broken down they emit aromatic amines, which can cause cancer.

Polyvinylchloride (PVC). A plastic with a wide range of applications, used in pipes, profiles, bottles, cable insulation, etc. Its environmental impact has been the subject of intense debate. Heavy metals may be discharged from stabilizers used in PVC items; and when PVC is burned, dioxins (some of which are highly toxic and cause skin disorders, cancer and gene damage) may be released.

Primary energy. Energy that has not undergone transformation. Sources of primary energy that can be transformed into electricity and heat include crude oil, coal, natural gas and water used to generate hydroelectric power.

Recycling. Reintroduction of used materials or liquid residual products into manufacturing processes. A natural part of resource conservation. Today, most products are designed and manufactured with recycling in mind.

Renewable energy sources. Energy sources that replenish themselves naturally within a short period, making them continuously available. Sources of renewable energy include hydroelectric power, geothermal energy, ocean thermal energy, wave power, solar energy, wind power, and biomass.

Stakeholder Advisory Panel (SAP). ABB holds group level stakeholder consultations at least once per year with a top-level Stakeholder Advisory Panel. The members in the panel may change depending on the topic of the consultation.

Sulfur hexafluoride, SF_6. A gaseous insulator used in some electric circuit breakers, substation connections, transformers, and power cables. SF_6 is a potent **greenhouse gas**.

Sustainability, or sustainable development. Meeting the needs of the present without compromising the ability of future generations to meet their own needs. Sustainable development combines economic growth and increased prosperity with preservation of the environment and quality of life for people around the world. Sustainability is often said to have three interdependent dimensions: ecological, social and economic sustainability. Sometimes a fourth dimension – cultural sustainability – is added.

Volatile organic compounds (VOCs). Organic compounds that evaporate easily, contaminating closed surroundings and spreading in the open atmosphere. They are often directly or indirectly hazardous to the environment and to health. The largest releases of volatile organic compounds stem from combustion of fossil fuels. Other sources are solvents and paints. VOCs include toluene, xylene, styrene, naphthalene, and ethanol. VOCs that contain chlorine, such as trichloroethylene, are classified as chlorinated volatile organic compounds, VOCCl.

Further reading

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International Standard ISO 14001: Environmental management systems – specification with guidance for use

International Standard ISO 14004: Environmental management systems – general guidelines on principles, systems and supporting techniques

International Standard ISO 14040 – 42: Life cycle assessment

International Standard ISO 14025, Type III Environmental declarations

ISO/TC 207/SC: Environmental performance evaluation, DIS 14031, November 1997

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ILO Guidelines on Occupational Safety and Health Management Systems (April 2001).

Publications available from ABB

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For further information, please contact ABB Sustainability Affairs. See back page for contact addresses.

Sustainability on the Web
www.abb.com/sustainability

A living, interactive document

We strive to balance economic, environmental and social objectives and integrate them into our daily business decisions to create value for all of our stakeholders. Sustainability therefore has an important place on our Group Web site.

If you want to know more about our activities, news and achievements, visit our sustainability Web site (www.abb.com/sustainability). You can also download copies of our sustainability reports and summaries, environmental product declarations as well as articles, speeches, and an extensive question and answer paper on key issues.

An important element of ABB's strategy for sustainability is to be a partner in initiatives that foster economic, environmental, social and educational development, so that we can improve the quality of life in the communities and countries where we operate. You can find more details about ABB's involvement with sustainability initiatives and associations on our Web site.

Contact us

Sustainability is one of the key issues of our time. It thrives on the exchange of information and ideas between different stakeholder groups. ABB has activities in around 100 countries and we would very much like to hear your views on our sustainability objectives, activities and performance, as described in this report. We value new ideas, and welcome the opportunity to hear and address your concerns.

You can contact us at www.abb.com/sustainability or you can contact our sustainability affairs team directly:

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We look forward to hearing from you.

Other publications available from ABB

ABB Group Annual Report 2002
This report was published in April 2003. If you would like a copy, please contact ABB corporate communications at the address printed on the back of this publication, or download the report from our Web site (www.abb.com).

ABB Group Technology Report
This annual report describes ABB's commitment to innovation and will be published in November 2003. If you would like a copy, please contact ABB corporate communications at the address on the back of this publication, or download the report from our Web site (www.abb.com).

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