

Products and services

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Our stakeholders have confirmed to us that resource efficiency, products and systems which strengthen renewable sources of power, and our efforts to limit both customers' and our own environmental footprint, are important issues for them. These issues are also material to ABB's business success. More than 50 percent of ABB's revenues stem from energy efficient products, systems and solutions that we provide to our customers to increase their productivity while lowering environmental impact. Driving innovation in these areas is key to our future success.

Products and services

Innovating for a better world

Technology is one of ABB's key differentiators and is crucial to our long-term competitiveness. Through continuous development of our portfolio of products, systems and services, ABB helps our customers improve their operating performance, grid reliability and productivity while saving energy and resources, and lowering environmental impact.

Innovation is at the heart of ABB's growth strategy, and research and development (R&D) is a critical strategic resource for the Group. To support our R&D effort, we maintain seven corporate research centers, employ some 8,000 researchers and developers and collaborate with more than 70 universities across the world. ABB's R&D investments in 2013 totaled \$1.5 billion, representing 3.5 percent of revenues.

These investments bring results. In 2013, ABB filed more patent applications in Europe than any other Swiss-based company, a confirmation of our efforts to serve the market with innovative products and solutions. This was further underlined in 2013 when Thomson Reuters and the MIT Technology Review recognized ABB as one of the world's top innovators.

ABB is also committed to the localization of technology research and we have been increasing our capacity for local research and innovation in growing markets such as China and India, as well as in the United States. In China, for example, we now employ over 2,000 researchers and engineers in 20 cities across the country.

Helping to shape a better world

ABB has identified mitigation of climate change, renewable energy, energy and resource efficiency and increasing urbanization as key drivers and growth opportunities for our business. About 51 percent of our revenues are already related to products and services in our energy efficiency portfolio that help customers save energy and reduce greenhouse gas emissions.

Our technologies are used along the entire energy value chain from the extraction of primary resources, the liquefaction of natural gas or refinement of petroleum products, to their transformation into electricity and their efficient use in industry, transportation and infrastructure.

Utilities: Power plants consume five percent of the electricity they generate. This can be cut by 10 to 30 percent by optimizing operations and auxiliary systems through the use of sophisticated control systems and energy efficient equipment. In transmission and distribution, ABB technologies enable more power to travel over existing networks and reduce power losses.

In the 1950s, ABB pioneered high-voltage direct current (HVDC) technology, enabling the efficient transmission of electricity over large distances. We have now developed the world's first direct current (DC) circuit breaker for HVDC systems, solving a longstanding engineering puzzle and paving the way for a new generation of highly efficient, interconnected and reliable power transmission grids.

.....
400 TWh of electric power saved by our installed base of variable-speed drives
.....

In addition to efficiency efforts, governments around the world are focusing on reducing CO₂ emissions by increasing the use of renewable energy in the power chain. However, integration of renewable energy into existing grids presents significant challenges: generating sites are often located in remote areas and can depend on intermittent primary energy sources such as wind and sun. ABB's HVDC technology facilitates the efficient, long distance transfer of power from hydro, solar and wind power projects and is a key enabler in a future energy system based on renewables.

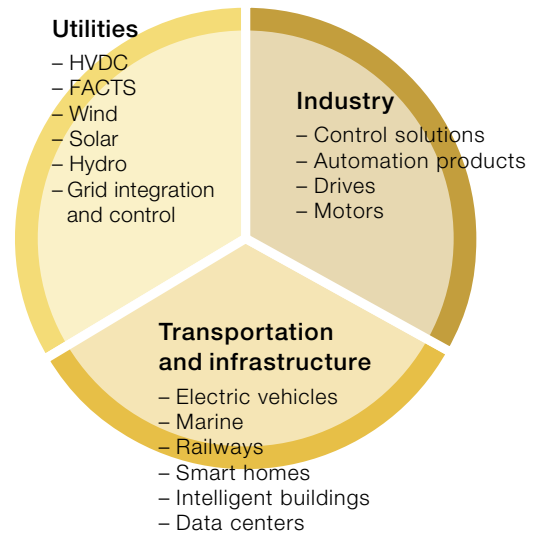
We are also a leading supplier of technology solutions to solar, wind and hydropower customers. ABB has been developing solutions for the hydropower industry for more than 125 years and provides the market's most comprehensive range of power and automation products and systems. With our expertise in power electronics, ABB is also a key player in the solar industry, providing solar inverters, low-voltage and grid connection products as well as PV power plants. We are a leading supplier of electrical products and solutions to the wind power industry.

Industry: The industry sector accounts for around one third of the world's energy demand. ABB can improve industrial energy efficiency at facilities ranging from the most energy-intensive process plants to factories engaged in discrete manufacturing. We provide modern control solutions, automation products and electrical equipment.

Motors, used to power fans, pumps and compressors in a wide range of industries, account for an estimated 65 percent of all industrial energy use. ABB's variable-speed drives control the speed of electric motors to match the task in hand, reducing energy consumption by 30 to 50 percent and improving performance.

Our continued development of drives technology has reduced their size and cost, improved reliability and broadened their

Solutions for a better world



applications. In 2013, ABB's installed base of low-voltage drives saved an estimated 400 terawatt-hours of electric power, the equivalent of more than 100 million households' annual usage in the European Union, and reduced global carbon dioxide emissions by some 340 million tons.

Transportation and infrastructure: Urbanization – especially in developing economies – will result in about 1.5 billion more people living in cities over the next 20 years. The challenge will be to support such growth with minimal environmental impact.

An effective way to support these city goals is to use technology to monitor, optimize and control key systems and infrastructure in a more intelligent way. ABB products and solutions are at the heart of a city's critical infrastructure, relied upon for everything from the supply of power, water and heat, to the automation of the buildings we live and work in. We offer smart solutions in the areas of city communication platforms, electricity and water networks, transport, buildings, and district heating and cooling.

The transport sector represents 23 percent of overall global carbon emissions generated by fossil fuel combustion and is expected to grow by approximately 40 percent between 2007 and 2030. ABB technology can help lower energy losses and reduce carbon emissions in transportation on both land and sea.

In electric mobility, ABB is a world leader in DC fast-charging technology, providing a unique multi-standard design that supports all fast-charging standards and protocols. This is critical to maintain compatibility between rapidly evolving cars and chargers in the years to come. In 2013, we won a landmark contract to supply a nationwide fast-charging network for electric vehicles in the Netherlands, having already constructed a similar network in Estonia.

In rail transport, ABB offers solutions for transferring power efficiently from grids to trains and, on board, supplies a range of traction solutions to help public transport operators provide efficient, less carbon-intensive transport.

ABB is a leading solutions provider for electric power and propulsion systems for ships at sea and has introduced DC – instead of alternating current – electrical infrastructure to run propulsion rotors. This enables more efficient variable-speed operation of the main engine generator sets, cutting up to 20 percent in energy and fuel consumption, and reducing emissions. ABB commissioned the world's first application of this high-efficiency innovation in 2013.

Increasing impact through collaboration

As well as conducting research in our own laboratories, ABB collaborates with over 70 universities and research institutions across the world. Our investments in research initiatives, fellowships and strategic partnerships continue to enhance the ABB portfolio and lead to international and cross-industrial cooperation in almost every ABB business.

We also continue to invest in the ABB Research Grant Program, initiated in 2012 and intended to support promising graduate students and senior researchers working on projects with industrial applications in power and automation. Grants typically range from \$50,000 to \$80,000 per year, initially for one year, but with the goal to continue over multiple years.

Investing in technology leadership

Additional key components of ABB's innovation strategy are investments around inorganic growth (mergers and acquisitions) and venture capital investment. ABB has executed more than \$10 billion of strategic acquisitions since 2010, and in 2013 we continued to expand our portfolio. The most significant acquisition was solar inverter maker, Power-One, which makes ABB the number two global player in the most intelligent part of the solar photovoltaic value chain.

Our corporate venture capital unit, ABB Technology Ventures, makes early- and growth-stage investments in novel companies introducing new technologies or improvements to existing technologies. The goal is to build technology leadership and drive growth, to both complement and add to the activities of our existing R&D programs. In 2013, we made key investments in renewable energy technologies, including Romo Wind, which improves the performance and energy generation of wind farms, and Scotrenewables, a Scottish tidal turbine company.

ABB's investments, along with recognition by MIT Technology Review and other innovation awards, reaffirm our commitment to innovation and the future success of ABB and our customers. Examples of achievements and innovations announced in 2013 are shown on the following pages.

Achievements and innovations in 2013



A world first in low voltage

Low-voltage circuit breakers are ubiquitous, but the new Emax 2 is the only device that can both protect electrical circuits and adapt energy consumption within user specified limits on peak power use. Replacing existing traditional breakers with the Emax 2 breaker has the potential to achieve annual savings of 5.8 million MWh, energy savings that would reduce CO₂ emissions by 4 million tons. Breakers like Emax 2 are deployed where protection and control of large amounts of energy are used in a low-voltage environment such as industrial and commercial buildings, data centers or ships.



Irish and Welsh grids connected

ABB has connected the power grids of Ireland and Wales with an undersea HVDC transmission link. Currently the highest-rated HVDC Light® connection at 500 MW, the link enables cross-border power flow, enhancing grid reliability and facilitating power trading between the two countries. The link also facilitates the integration of renewable energy; as Ireland expands its wind power capacity, it can export surplus electricity to the United Kingdom and can import power when required. Additionally, HVDC Light's "black start" capability can help restore power quickly in the event of an outage, without the aid of external energy sources.



Wind of change

ABB has designed and tested a new approach to selecting the electrical drivetrains for wind turbines, providing a solution that is compact, lightweight and of the highest efficiency, compared to all other concepts. The drivetrain is the main electrical production system of the turbine and influences the weight, size and maintenance needs of the turbine. Selection of the appropriate drivetrain requires care and must take into account all of the requirements and lifetime costs, including turbine power, grid requirements, availability, material and maintenance costs.



Switchgear for smarter grids

A new disconnecting circuit breaker with a fiber-optic current sensor (FOCS) simplifies substation design while adding to the intelligence of the device. For many decades, current measurement in high-voltage equipment has relied on often bulky transformers that could weigh up to several tons. These measurement transformers can now be replaced by ABB's FOCS, whose small size allows it to be integrated into primary equipment such as circuit breakers, saving on space and installation costs. The FOCS also saves on material – e.g. aluminum, copper, insulation materials and transformer oil – that are contained in a functionally-equivalent conventional current transformer.

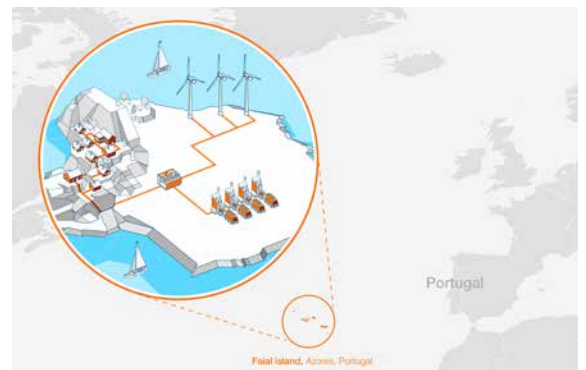
New electric bus tested in Geneva

With no overhead lines and ultrafast charging times, the bus enables new opportunities for silent, flexible, zero-emission urban mass transportation. The system delivers a 15-second charge at bus stops, providing enough power for the bus to reach the next charging stop, allowing for traffic and detours. The fast-charging technology and the onboard traction equipment used in this project were developed by ABB and optimized for high-frequency bus routes in key urban areas. Thanks to an innovative electrical drive system, energy from the roof-mounted charging equipment can be stored in compact batteries, along with recuperated energy due to vehicle braking, powering both the bus and its auxiliary services, such as interior lighting.



Greening the microgrid

Faial, one of the Azores islands in the mid-Atlantic ocean, has deployed ABB software that will allow it to meet its goal of generating 75 percent of its electricity from renewable sources by 2018 without destabilizing the network. The microgrid control solution – based on ABB’s Microgrid Plus – controls and monitors all the wind turbines and oil-fired generators on the island, calculates the most economical configuration, ensures balance between supply and demand, maximizes the system’s use of wind power and, crucially, optimizes the generators so that the entire system performs at the peak of its potential.



An intelligent solution for universities and colleges

ABB has launched a data center infrastructure management (DCIM) solution specifically for academic institutions, to help them reduce data center energy costs while increasing reliability of online services. With the proliferation of online courses and services in higher education, institutions depend increasingly on reliable and affordable management systems for energy-hungry data centers. The DCIM “Education Edition” provides special pricing on deployment for accredited academic institutions, real-time power monitoring for both power and cooling systems and specific reporting to increase visibility of energy savings and forecasting.



Meeting demand for energy efficiency

New technology for the capture and reuse of regenerative braking energy in trains boosts the energy efficiency of traction systems. Rail vehicles regenerate braking energy through their traction motors. Most of the time, a small portion of this kinetic energy powers onboard loads, while the remaining energy is sent back to the network and reused if a nearby vehicle is accelerating. If this is not possible, the surplus is usually dissipated. With ABB’s Enviline™ Energy Recovery System, this waste can now be minimized and overall energy consumption reduced by 10 to 30 percent – without the need to invest in new rolling stock or network control systems.





Responsible relationships

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ABB recognizes that business is part of society. How we interact with our stakeholders, both within and outside the company, will help determine our success as a business and determines how welcome we are in the communities where we seek to carry out projects. Our social license to operate – our ability to build sustainable business throughout the value chain – depends on our people acting with integrity and respect towards all our stakeholders. Acting responsibly towards our many stakeholders strengthens our bottom line, builds value and partnerships, and enhances reputation.

Integrity

A prerequisite for doing business

ABB's technology makes a major contribution to businesses and communities around the world. However, it is not only what we do, but how we do it that determines our reputation with stakeholders and ensures our continued success.

ABB sets high standards of integrity, which are expected of every employee in every country where we do business. We use a systematic approach, supported by tools and processes, to embed integrity in the organization and apply a zero tolerance policy for violations.

Standards of business conduct

The ABB Code of Conduct is the integrity framework that describes the behavior expected of employees and stakeholders. The Code of Conduct contains practical instructions to help employees in their day-to-day work and has been translated into 45 languages to ensure it is accessible to everyone at ABB.

The Code of Conduct is underpinned by a strong set of internal standards and policies that provide specific guidelines for implementing the Code in daily activities. These directives cover issues such as bribery and corruption; gifts, entertainment and expenses; appointment of ABB representatives; political and charitable contributions; agreements with sub-contractors and consortium partners; and mergers and acquisitions due diligence.

A series of anti-trust guidance notes complement these directives. These guidance notes, along with the key elements of our integrity standards and policies, are publicly available on our [website](#).

Educating and empowering our employees

All current and new employees are required to take Code of Conduct face-to-face and e-learning training. Basic and advanced training sessions cover the ABB integrity directives, including anti-bribery and anti-trust issues. A range of case studies illustrate both desirable and undesirable behaviors and highlight the various reporting channels available to employees. Code of Conduct training is also a key element of post-acquisition integration activities.

In January 2012, ABB embarked upon a new global, face-to-face integrity training program for all employees, covering a variety of risk areas such as anti-bribery and anti-trust. By the end of April 2013, a total of 147,000 employees had completed the training, representing approximately 99 percent of all ABB employees worldwide.

99% of employees worldwide received face-to-face integrity training

We also delivered a new face-to-face anti-trust training program for targeted employees from June 2012 until the end of September 2013. More than 25,000 employees were trained on competitive intelligence gathering versus commercially sensitive information exchanges, and nearly 22,000 employees received training related to trade associations.

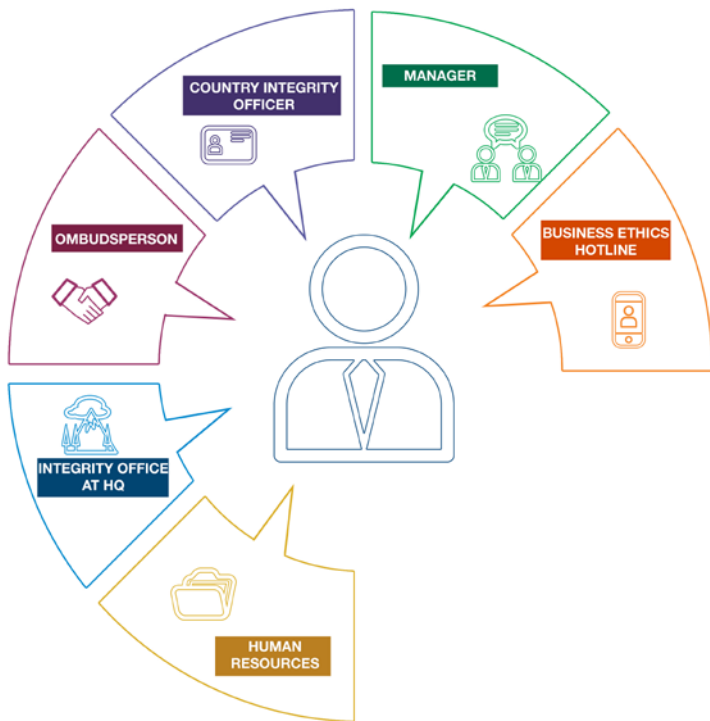
Prevention and detection

ABB also maintains additional programs to prevent non-compliant behavior and to detect integrity concerns. Anti-bribery reviews of business units and countries are conducted throughout the year by ABB's internal audit department. In these reviews, the auditors review business processes, accounts and balances, and test transactions to assess the robustness of controls and identify possible violations of ABB's anti-bribery procedures.

We also conduct internal surveys to understand employee attitudes, awareness and perceptions of integrity at ABB, and develop enhanced integrity processes to address certain areas with greater compliance risk.



During July 2013 a global Integrity Culture and Risk Survey was conducted by the professional services firm KPMG AG. Over 24,000 employees responded to the survey, which measured integrity on eight dimensions: clarity, role modeling, enabling environment, support of employees for Integrity, transparency, openness to discuss dilemmas, comfort to report misconduct, and enforcement. The outcome confirmed that ABB has a strong ethical culture, that our communication and training efforts have resonated in the organization, and that the vast majority of employees would report if they saw a concern.



Multiple channels are available to all employees to report integrity concerns. A multilingual business ethics hotline, run by a third party, is available 24 hours a day, seven days a week. Calls are treated confidentially and people with information can choose to remain anonymous. A stakeholder hotline is available to our external business partners. More details on our reporting channels are available on our [website](#).

ABB also has an Ombuds program as an additional route for integrity reporting. This program was expanded during 2013, with over 75 trained Ombuds persons now available in just over 50 countries. The ABB Ombuds persons are respected, experienced business colleagues who agree to fulfil this additional role to their daily work, and who are available for discussion and to provide confidential guidance.

Overall, the ABB integrity program is supported by a team of approximately 500 employees, full-time and part-time, at headquarters and around the world.

ABB investigates all potential integrity concerns and cooperates fully with law enforcement agencies. There is a strict zero tolerance policy for violations of the law or the ABB Code of Conduct, which is enforced through systematic disciplinary actions.

External recognition

In March 2013 ABB was named by the Ethisphere Institute, a leading international organization dedicated to best practices in business ethics, to its 2013 list of the world's most ethical companies. ABB was recognized because of its demonstrated leadership in ethical business practices according to the Ethisphere Institute. Ethisphere also awarded ABB with two seals: Compliance Leader Verification and Anti-Corruption Program Verification.

Ethisphere recognizes organizations that have made the decision to proactively invest in compliance, thereby sending a clear signal to key stakeholders that their company takes its commitment to compliance and ethics seriously. Ethisphere's Anti-Corruption Program Verification offers objective, independent verification of a company's anti-corruption program and initiatives, including a comprehensive review of policies, procedures, training, communication, controls, and enforcement. Anti-Corruption Program Verification can only be earned by companies that are able to prove they have designed, implemented, and enforced a robust, best-in-class anti-corruption program that is capable of reasonably detecting and preventing bribery and corruption.



Our people

Key to business success

ABB has systematic approaches in place to recruit, engage and develop people who can help us to meet our business needs and customer requirements. Our aim – the key to our business success – is to have the right people in the right places at the right time.

With 150,000 employees worldwide and several thousand on the move at any one time, we need to be sure that we have the appropriate processes to support our employees' performance, behaviors and development, and give the company a competitive advantage in different countries and cultures.

Our approach is to ensure we plan and resource appropriately to meet divisional, global and local business needs; to improve skills and competence in key operational areas; to focus on attracting and retaining dedicated and skilled employees; and to integrate newly acquired companies successfully into the ABB fold. We are also working hard to broaden diversity, recognizing this contributes to our business success.

Multicultural benefits

ABB is a truly international company with a strong multicultural environment. We are headquartered in Switzerland and have strong historical ties there and in Sweden, but this is a company not tied to a particular country or national identity. Having a multicultural workforce improves our ability to respond to customer demands in different parts of the world, and strengthens the spirit of collaboration and innovation across the Group.

Of the 750 people based at corporate headquarters in Zurich, there are people from 54 countries. It's a diversity – and strength – that is mirrored in many of the 100-plus countries where ABB has business operations.

In 2013, we received online recruitment applications from 318,000 people in 69 countries – a sure sign of our global reach and ability to attract people who want the opportunity to develop and contribute to business success through their core skills.

Systematic training and development

The level of support, career development and opportunities that our employees enjoy is among the best in the business world. We strive to make sure that they receive the right support to realize their full potential, relying on a mix of structured talent management and learning offerings.

Our programs include:

- A Talent Management process which has been improved and embedded in all regions. Around 89,000 formal personal performance and development assessments were conducted in 76 countries in 2013. The process focuses on identifying those people with potential, building on their strengths, and supporting development activities.
- Leadership development programs for different levels of management. A total of 95 senior managers attended two courses of the Senior Leadership Development Program held in partnership with the IMD business school – one of the most highly rated globally - in the Swiss city of Lausanne. The Middle Manager and First Line Manager global programs covered a further 380 middle managers and nearly 1,500 first line managers in 2013.
- The three-day Leadership Challenge program, offered to all employees and delivered in 14 languages focuses on taking personal leadership, irrespective of the position or role in the company. Another 5,800 employees completed the course in 2013, bringing the overall total to about 60,000 since it started in 2004.

Diversity and inclusiveness

A diverse and talented workforce, recruited globally, provides a broader range of qualities and skills that support innovation and help us to meet some of our biggest challenges. Our diversity program, based on a number of local and corporate-level initiatives, is currently focused mainly on gender.

- As part of our efforts to support women at ABB and encourage more women to become engineers, we have partnered with [The Women's Forum](#) since 2012. It brings together leaders from business and government all over the world to share new perspectives on key commercial, political and social questions. ABB's participation raises our profile among female leaders and enables us to contribute to and learn from best practices in other leading businesses.
- We launched the [women's mentoring program](#) in the United States in 2013 to support female employees in becoming more effective leaders by accelerating their learning and development.
- In Sweden, ABB seeks to encourage and [attract female engineers from universities](#) as part of attempts to create a more diverse workforce. Several have taken internships or been hired.
- In India, there are a number of ongoing programs to strengthen the presence of women in executive, functional and factory roles. These include workshops for line managers to strengthen understanding of the business value of diversity and inclusiveness, as well as efforts to increase the number of women in the interview pipeline, and to raise the number of women on the shop floor.



We also work on other issues of diversity and inclusiveness. In Australia, for example, ABB joined a three-year Reconciliation Action Plan in 2013 to create social, employment and business opportunities for indigenous Australians.

In the United Arab Emirates, where young Emiratis traditionally join the public sector, we have been encouraging them to join ABB by publicizing our training and the flexible, long-term career opportunities available. We have been able to engage more young Emiratis – people who are well positioned to support the business.

In other countries, diversity efforts also involve integrating people with disabilities into the workforce. A team has been set up at ABB in Italy to improve the employment opportunities for people with disabilities. The emphasis in South Africa is different: all employees receive training to promote greater understanding of disabilities and ways of integrating disabled people into the workforce.

Mobility supports business success

Employee mobility creates value for ABB, our customers and our people. We encourage interested employees with the right level of experience and knowledge to transfer to projects or locations where they can both contribute to business development and gain further experience.

Nearly 960 people were on long-term international assignments in 2013 – a slight increase on 2012. The most common assignment duration is between one and two years. We are also starting to see more employees from emerging economies move on assignments to ABB locations in mature markets, as well as the more customary moves in the other direction. India, Brazil and China are now among the top ten exporting countries for talent within ABB.

Attracting young people

Attracting talented young people and developing them for future leadership roles is key to delivering business value.

ABB already has a good reputation in several parts of Europe where engineering students again voted ABB an employer of choice in 2013. Our strong reputation as a technology innovator and a responsible company is attractive but competition for top talent is fierce.

In employer branding research we found that ABB is not as well known among electrical engineering students in some countries as we would like. Internal initiatives have been started, backed by key performance indicators, to achieve the state

of recognition that we would like in the coming years. We have also redesigned the ABB careers portal based on the results of the research, with a better focus on differentiation factors that ABB offers and expects from employees.

One of the ways in which we attract talented graduates is through our two-year global trainee scheme which involves different assignments around the world and across multiple disciplines. A total of 24 global trainees – one third of them women – joined ABB in 2013. They come from 16 countries and have taken on a variety of roles in areas such as information services, finance, human resources and sustainability.

318,000 online applications
to join ABB in 2013

Another way in which ABB seeks to attract the best prospects is through partnering with CEMS, a strategic alliance of leading business schools and multinational companies whose goal is to set a global standard of excellence for pre-experience Master's holders in management. ABB has been a partner for the past three years. About 60 CEMS alumni work at ABB.

Once graduates join the company, they benefit from the ABB Life program which is designed to develop and prepare talented young people for future leadership roles. A total of 380 young employees and new recruits went through the global program in 2013.

Other Human Resources-led programs are also available to help in personal development. These include the Global Mentoring scheme which was launched in 2008. A total of 166 mentors and mentees participated in the program in 2013. Mentees benefit from advice and guidance; mentors also learn and appreciate the opportunity to pass on their knowledge and experience.

English is the common language in ABB and, as part of other efforts to improve language skills, ABB offers a Standard English training course free of charge to employees and their family members. About 39,000 people have so far activated a license to strengthen their skills.

All these programs are designed to foster business excellence and success, and strengthen the development and loyalty of employees. As we pursue further business opportunities, we know our employees are our greatest asset.

Stakeholder relations

Engaging to create business value

Engagement with stakeholders has a clear business value. We learn more about stakeholders' requirements, what we need to prioritize and how we can improve our business and sustainability performance.

In the past year we have seen further evidence that a wide range of stakeholders want to know more about our sustainability performance and are basing their decisions and – in some cases, public ratings of ABB – on the evidence we provide. Customers, for example, increasingly require us to provide information on a raft of issues, ranging from our health and safety record and the resource efficiency of our products through to our sourcing policies and our processes for ensuring compliance with legal frameworks around materials we use in our products.

Other stakeholders, such as some investors, export credit agencies and ratings agencies increasingly ask for evidence that ABB is managing potential social and environmental risks, and factor these issues into their decision-making models. Representatives of civil society and the media are also watching ABB closely, monitoring whether we meet the high standards we have set ourselves.

In 2013, we also carried out two surveys with stakeholders which will have an important bearing on our future and success. Extensive consultations were carried out with both internal and external stakeholders as part of the process of developing new [ABB Group Sustainability Objectives](#), applicable to the entire company, for the years to come. A second survey, which focused on customers and external specialists, increased our understanding of the [materiality](#) of particular sustainability issues to ABB's business ambitions.

Working with customers and investors

Sustainability experts were integrated into business meetings on numerous occasions in 2013 to support potential business opportunities and answer customer inquiries.

The type of engagement varies considerably: Our energy efficiency experts, for example, met customers at the main fairs and key customer events; health and safety specialists briefed companies in the oil and gas industry on the ways ABB is seeking to improve performance; we briefed government officials on resource efficiency on numerous occasions, including during trade visits; and other specialists provided support on potential business project risks through social and environmental due diligence.

ABB has seen a gradual increase in investor interest in environmental, social and governance (ESG) issues, and how we manage our risks. There were regular sessions during 2013 with investors – mainly socially responsible investors but also some mainstream funds – on a series of issues related to ESG performance.

20 awards for good corporate citizenship worldwide

Measuring outcomes

Gauging customers' levels of satisfaction with our performance is central to our overall success. For the fourth consecutive year, ABB employed a customer satisfaction initiative called the "net promoter score" program to measure customer feedback to help us improve our business performance. The results for 2013 show that customers are increasingly satisfied working with us; the number saying they would recommend ABB to a colleague rose to 35 percent in 2013 compared to 29 percent in 2012.

The net promoter scorecard is part of ABB's overall commitment to building a culture of quality and continuous improvement that drives growth through customer loyalty.

ABB also compiles, validates, tracks and analyzes all customer complaints in a single, global system that helps to resolve problems quickly and efficiently. This system – the Customer Complaints Resolution Process – also provides valuable pointers for improvement.

Engagement

The most frequent discussions in 2013 involved customers and suppliers, as well as ABB employees. There were also meetings at a national and corporate level with government representatives, unions, NGOs, media representatives and academics.

Stakeholder engagement on sustainability-related issues takes many forms, and the subject matter is wide:

- In many countries, our engagement with suppliers focuses on improving their performance. This can take the form of supplier assessments, as in Brazil, China, Czech Republic, India and Mexico in 2013 or discussions with suppliers about environmental, health, safety and labor requirements.



- The issue of students leaving college without the skills needed by industrial companies was discussed at an ABB round table in South Africa and resulted in concrete proposals for training schemes.

- Meetings with representatives of different European unions resulted in renewed commitments to support efforts to improve health and safety performance at ABB. A series of meetings with unions in France reviewed contractual issues such as conditions for working abroad, health costs and working hours.
- ABB engages with a number of non-governmental organizations in several countries on individual issues or in partnerships such as rural electrification projects, or by speaking at NGO-organized meetings
- ABB in Finland uses its convening power in Vaasa where we are a major employer to raise core issues. In 2013, ABB organized a top management seminar, attended by 60 CEOs, to review issues related to competitiveness, leadership and the work-life balance. In addition, company managers and key figures from the community meet on an annual basis to discuss the use of land, infrastructure, the employment situation and future perspectives.



ABB is also active in the public policy arena in different regions. We continue to engage in the European Union, for example, for decisive and common political action on energy policy, and other areas of importance to ABB's technology interests, including smart transmission and distribution infrastructure, clean transport and energy efficient industrial processes. These issues are also central to discussions in other countries. In the United States, ABB seeks to help regulators and policy makers understand the benefits of energy efficient technologies, while in China ABB has been supporting government activities on energy conservation and environmental protection in line with the country's 12th Five-Year Plan.

The academic world is another area of strong focus for ABB. There is a strong interaction with universities and academic institutions on issues ranging from collaborative research projects to teaching students in Sweden and Switzerland about the corporate responsibility to respect human rights.

ABB also gains value by being actively involved in a number of multi-stakeholder organizations, participating in key meetings of the UN Global Compact and the World Business Council for Sustainable Development.

Awards

In recognition of our social, environmental and community engagement activities, ABB won 20 awards worldwide in 2013. These awards build brand value in the countries where they are awarded, and strengthen employee commitment both to the causes that ABB supports, and to the company as a whole.

The awards include recognition by the Ethisphere Institute, a leading international organization dedicated to best practices in business ethics, which included ABB in its 2013 list of the world's most ethical companies.

ABB's environmental performance was recognized in China where we received three awards, including one from the China Entrepreneur Club which named ABB as one of the top three green companies. In Vietnam, ABB received a National Environment Award for our waste and water management at our Bac Ninh site.

Despite a very difficult year from a safety perspective, our efforts to improve performance in this area led to awards in the United States and the United Arab Emirates. And our contributions to safety in the oil and gas industry in Argentina and to the mining industry in Chile were also recognized.

ABB's work with disadvantaged people was appreciated in several countries. In Germany, for example, ABB received a special award for our commitment to and engagement in the Special Olympics organized each year for people with mental disabilities. In Oman, ABB was recognized for the second year running as one of the top corporate social responsibility practitioners in the Middle East and North Africa.

Working in the community

Supporting education and health

ABB has two main focus areas when carrying out community work: supporting education and health. We have about 300 projects worldwide which seek both to help people and to strengthen ABB's place in the community.

Our approach is both global and local. We enter into strategic corporate partnerships with targeted impacts, and also decide at a country level which projects to support based on their likely effectiveness and potential benefits to ABB.

300 community projects
are supported worldwide by ABB

The schemes are highly varied, ranging from improving the infrastructure of schools, developing students' technical skills and helping disabled people enjoy sports activities, to partnering with international and non-governmental organizations, and supporting disaster relief efforts.

There is a long tradition of community involvement and volunteering at ABB. In 2013, employees and companies donated approximately \$8.5 million and provided nearly 5,000 man-days in volunteering time.

Contributing to business success

Our community work is part of ABB's business success. We know we can make a difference, and it is good for our business and reputation to be welcome in the areas where we operate. We also know that such initiatives improve our ability to attract and retain talented employees.

The educational schemes and institutions we support serve to improve learning opportunities, raise ABB's profile and help us to recruit qualified engineers and other staff. Strengthening health care can have positive social and economic impacts among key company stakeholders, including our employees, suppliers and customers, as well as the communities around our facilities.

ABB developed and introduced its own assessment tool in 2013 to help measure the impacts and overall value of our investments in community schemes. The results will help us to evaluate the return on investment and achievement of project objectives, and to streamline our efforts towards the projects which provide most benefit for the targeted stakeholders.

Education



ABB works with students, schools and colleges in a variety of ways. One of the most innovative is in Brazil where young children from impoverished neighborhoods come to ABB factories for additional schooling and preparation for a working life. About 400 of them have taken part so far with impressive results: 75 percent go on to get jobs – some of them at ABB – and about one third of the children qualify to study at university.

Here are some of our projects:

- In Finland and the United States, ABB provides both funding and equipment for colleges and universities in areas where we have operations to support those institutions and attract successful graduates.
- A vocational summer school at ABB in Saudi Arabia which introduces students to the world of work and ABB's standards.
- A long-term scheme near five ABB manufacturing sites in India to re-build and furnish government schools, and provide a mid-day meal scheme for children. More than 4,000 children benefit.
- Volunteers from ABB Sweden take part in a program to teach mathematics to young people out of school hours.
- In Colombia, ABB provides equipment and helps to re-build bathrooms at a school in Bogota for children who have been displaced by violence.

ABB also has a focus on helping disadvantaged students. ABB's Group-level foundation to support talented but disadvantaged engineering students extended its partnership into a ninth country, Indonesia, in 2013, and is set to expand further. Several of the student scholars in the scheme are now pursuing careers at ABB.

Health

Many of the projects that ABB supports involve helping the less abled. Our projects include:

- ABB in Germany received an award in 2013 in recognition of our long standing support for summer and winter Special Olympics for people with mental disabilities. Similar games are supported in Italy and the United Kingdom.
- In the Czech Republic, employees are given a day off work every year to work on a range of programs, mainly focused on sports such as skiing, for people with mental and physical disabilities.
- ABB employees in many parts of the world support health causes such as cancer trusts with a variety of activities – from fun runs and sponsored golf tournaments in Canada and the US, to sponsored football matches and mountain hikes in the United Kingdom.
- In Egypt, ABB helped to build a water pipe network to a village, ensuring about 500 under-privileged people receive a regular water supply.

Relief efforts

Partly as a result of our decentralized structure, ABB is able to respond quickly to humanitarian or natural disasters. Most of our efforts in 2013 were concentrated on the Philippines after the devastation caused by Typhoon Haiyan. ABB companies and employees raised about \$500,000 in an operation coordinated by ABB in Southeast Asia.

ABB also responded to a number of other disasters in 2013. ABB joined other organizations in providing support and funds to people whose homes were damaged by floods in Germany and the Czech Republic; contributions were also made to support the victims of natural disasters in Mexico and Vietnam.

At Group level, ABB takes a strategic approach to humanitarian aid through the ongoing partnership with the International Committee of the Red Cross (ICRC). Our annual contribution to the ICRC – ABB Group's largest and longest-running single corporate sponsorship agreement – is used to support access to clean water in areas of humanitarian need in Iraq and the Democratic Republic of Congo.

Access to electricity

We believe we can make a significant and lasting impact on the social and economic development of communities through our rural electrification program, known as [Access to Electricity](#).

There are three main projects under way, highlighting the value of public-private partnerships. Two of these are in India: a distributed solar solution for desert hamlets in Rajasthan and a solar-power battery charging station in a coastal region of West Bengal. The third project is a diesel-powered mini-grid set up in a remote area of southern Tanzania.

As part of our efforts in Rajasthan, an impact assessment was carried out in 2012 which resulted in replacement batteries being provided where appropriate, and a clearer understanding of which sections of the community were benefiting most from the electricity. This will help to inform the next steps in the project.

All these projects are delivering social progress, with students benefiting from schools staying open after dark, health clinics being able to preserve medication in fridges and remaining open longer, and the positive health impacts of using electricity instead of biomass or kerosene for light in the home. The provision of electricity has also provided a fillip to local employment with some new businesses being started, and shops remaining open for longer periods.

Human rights

Work in progress

Stakeholder expectations of a company's responsibility to respect human rights have increased rapidly in recent years, with the UN Guiding Principles on Business and Human Rights, as well as other standards, calling on business to improve performance.

ABB has been working hard to raise awareness among managers of potential human rights risks, embed human rights due diligence in business decision-making processes, and build capacity within the company. It is hard work because of the size and complexity of ABB and the challenges in ensuring coherence of approach in many activities around the world.

We have long understood the materiality of human rights, knowing that violations can have human, legal, financial and reputational consequences – all of which are bad for business and inconsistent with company standards.

ABB carried out a first analysis in the mid-2000s on whether human rights impacts had been taken into account in internal processes. One of the initial steps afterwards was the adoption of the Group Human Rights policy in 2007. We also saw the need to introduce or strengthen human rights due diligence in three key areas – the divisional risk review process which all major project tenders have to go through, supply chain procedures, and the mergers and acquisitions process.

After the UN Guiding Principles on Business and Human Rights were endorsed in 2011, we carried out a further review of the most immediate challenges, focusing mainly on the need to strengthen due diligence. In addition, ABB knows that stakeholders' expectations of business behavior and issues such as access to remedy have been developing rapidly in recent years and can have an impact on a company's social license to operate.

Training

The Guiding Principles – and what is expected of companies – are a cornerstone of our training programs. A global awareness-raising program, designed for senior managers in our main manufacturing and exporting countries started in 2010 and continued in 2013 in several parts of East Asia and the Middle East. Special training was also provided to newly-appointed country managers. More than 400 managers have so far been trained worldwide in face-to-face sessions.



The training focuses on understanding how ABB can potentially impact human rights, positively and negatively, and highlights issues through company case studies from different countries.

A program of internal capacity building, designed to increase the number of people who are able to advise managers at a local level on business and human rights issues, was initially launched in 2012 and will continue in 2014 in different parts of the world. The training involves study of the legal and normative framework relating to the corporate responsibility to respect human rights, as well as how to identify and avoid risks, based on examples from the business.

Due diligence

ABB has been working on some of the substantive issues contained in the UN Guiding Principles for several years. Internal human rights experts have increasingly been carrying out due diligence on projects as part of the business process. Depending on the nature of potential impacts, some projects are selected for in-depth due diligence – either in the form of desktop research or through visits to sites and stakeholder engagement.

Through due diligence we seek to identify and avoid negative impacts. We also receive regular communications from stakeholders asking about our due diligence and decision-making processes: customers who require us, as a supplier, to detail our processes including those with our own suppliers; export credit agencies, which want to be satisfied ABB has researched potential social and environmental consequences of major infrastructure projects as a condition for financing them; and some investors and ratings agencies are also increasingly asking about the processes behind ABB's social and human rights performance, as well as details of our activities in sensitive countries.

In 2013, due diligence activities covered a wide variety of areas, including projects, the resolution of individual issues, and the improvement of processes.

- Research was carried out for a number of business units on issues such as potential product sales to mining and hydropower projects.
- The ABB Supplier Code of Conduct, which includes human and labor rights requirements, was strengthened, and the Supplier Sustainability Development Program which focuses on environmental and social issues, continues to be extended in different countries.
- Supplier audits revealed two instances of our suppliers retaining identity documents of migrant workers. ABB intervened to ensure employees could get back their documents or, in future, access them when wanted.
- Labor conditions were investigated at a company that was targeted for acquisition. Following its acquisition, two cases of child labor were found at a sub-contractor. Remedial action was taken immediately and no evidence of child labor was found during subsequent un-announced visits to the sub-contractor.
- An NGO expressed concern that ABB might be complicit in the violation of indigenous people's rights by supplying equipment for some dam projects. ABB has taken seriously the concerns expressed and is looking into the issues.

Access to remedy

ABB is continuing to look at a number of additional issues: the third pillar of the UN Guiding Principles – the issue of access to remedy for victims of human rights abuses; how to embed human rights more effectively in certain business-decision making processes and strengthen coherence, and how to strengthen adherence of security providers to human rights principles.

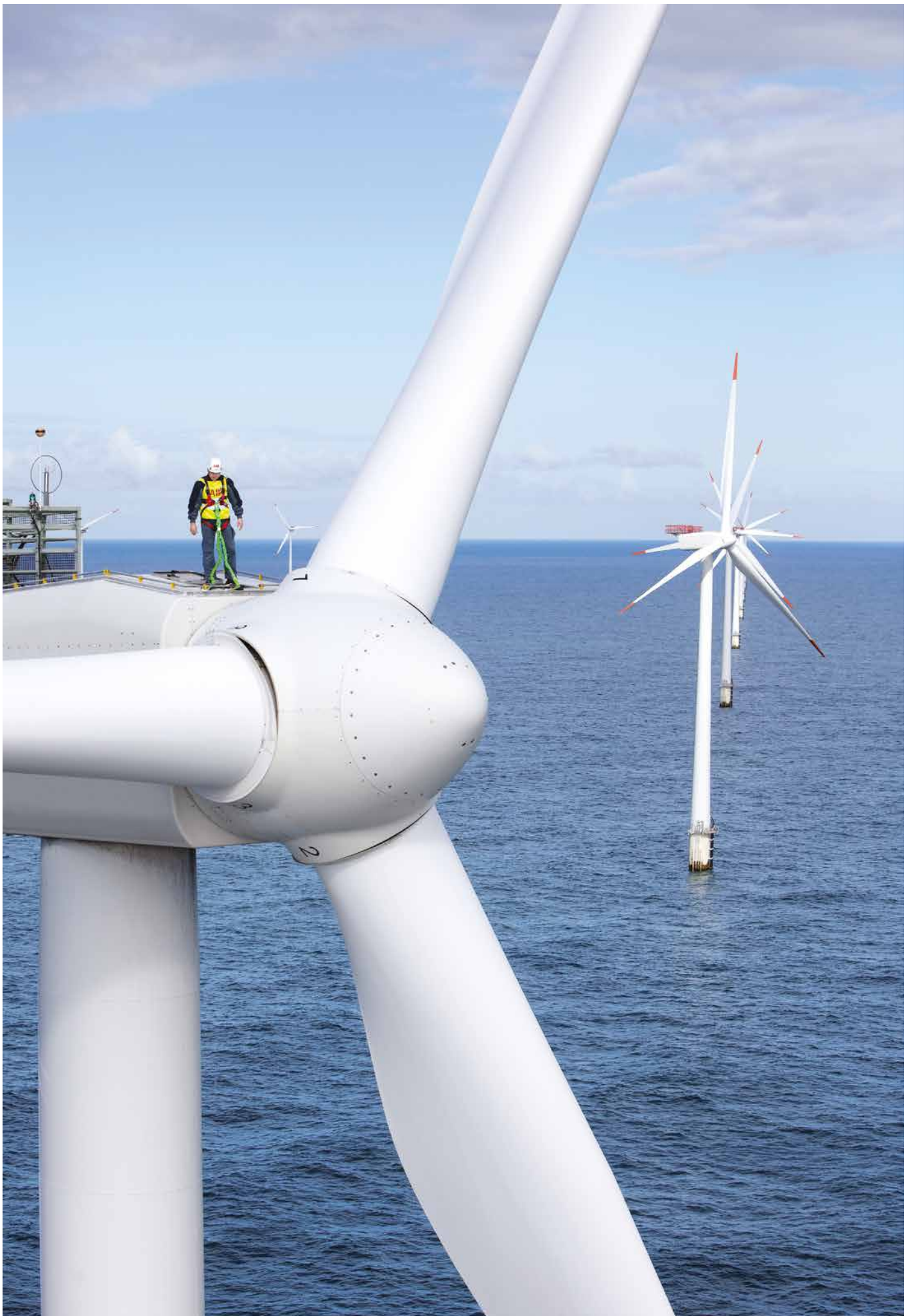
400+ managers trained on global awareness-raising program

As far as access to remedy is concerned, ABB has a Business Ethics Hotline, which was introduced in 2006 to provide all ABB employees and stakeholders worldwide with a means to report suspected violations of the ABB Code of Conduct or applicable laws. Contact details are published on ABB's internal and external website.

Engagement

While we are relatively modest about speaking of our progress, our experts have been involved in international efforts to promote the corporate responsibility to respect human rights. In 2013, our external activities included speaking at a number of international meetings, taking part in podium discussions, and working with university students in Switzerland and Sweden.

ABB works with and supports a number of organizations, including the UN Global Compact and some of its local networks, the Institute for Human Rights and Business, and the Global Business Initiative on Human Rights.



Responsible operations

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Responsible operations take many forms: our ability to manufacture in a resource efficient way and to limit our carbon footprint is good both for our business and for society. Responsible operations also means ensuring our employees and contractors can work in a safe and secure manner – even in a crisis – and maintain the resilience of our business. The relationship we develop with our suppliers is also crucial. Sourcing is key to our operations, and that partnership depends on our suppliers being committed to the social and environmental standards we set for ourselves and our business partners.

Energy efficiency, renewable energy and climate

Improving performance and reducing emissions

Just as we target mitigation of climate change, and energy and resource efficiency for ABB's customers through our product and solution portfolio, we have also been working for many years to manage and reduce the impacts of our own operations. At our plants and offices, and along our value chain, actions to reduce energy consumption and greenhouse gas emissions take many forms.

Energy efficiency in operations

ABB has a relatively light energy impact within our own operations, but as part of our goal to increase progressively the efficiency of our own operations, we set ourselves the target of reducing energy use by 2.5 percent per employee per year through to the end of 2013. This includes both direct and indirect energy use, for manufacturing processes and to operate buildings. To implement the objective, our most energy-intensive sites were required to undertake energy audits and all sites were required to develop an energy saving program.

For continuing operations – those included in the 2012 energy baseline – we achieved our 2013 objective, reducing our energy consumption per employee by 3.5 percent. However, inclusion of 2013 energy data from Thomas & Betts, a company acquired during 2012, increased our energy intensity result. This is due to the more energy-intensive nature of manufacturing processes undertaken by some of the Thomas & Betts facilities, such as galvanizing and electroplating.

With the release of ABB's new Sustainability Objectives 2014–2020, we continue our commitment to energy efficiency improvement. We now target a 20 percent improvement in energy efficiency by 2020, from a 2013 baseline that includes Thomas & Betts operations.

A wide variety of energy savings projects were implemented across the company to achieve our 2013 result. Most commonly – and cost effectively – facilities implemented energy efficient lighting solutions. Other activities included investigating and enhancing compressed air systems, optimizing heating, ventilation and cooling processes, and implementing or updating heat recuperation from machines and processes, often using our own technology.

For example, our plant at South Boston in the United States, one of our top ten energy intensive facilities, undertook a systematic review of energy consumption, including lighting, motors, fans, pumps, insulation and control processes and technologies. In 2013, it began a step by step improvement plan and is already seeing results. The replacement of over-size DC motors with Baldor AC motors and ABB drives and control systems is saving energy and maintenance costs and

has significantly improved productivity. We expect a payback on the more than \$600,000 investment in less than two years.

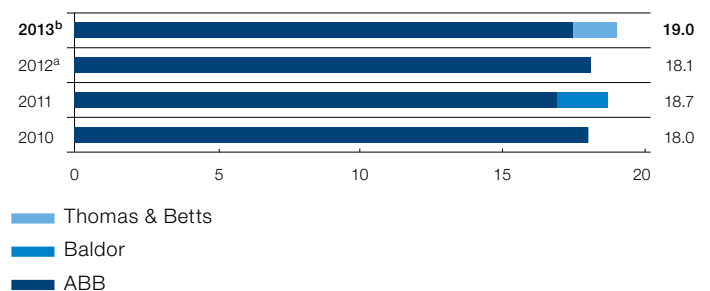
Building an efficient real estate portfolio

With a portfolio of around 8.8 million square meters of building space worldwide, ABB's corporate real estate management also plays a key role in our energy efficiency performance. The ABB Green Building Policy, introduced in 2008, sets out criteria for all new buildings, including site selection, building design and the choice of materials to optimize resources. It also details policies required for new development, refurbishment, and selection and management of rented space.



As a further step to improve the sustainability of our buildings, ABB is now implementing a focused corporate real estate energy efficiency program across Europe as a precursor to extending the project across the globe. The project is based on the highly successful Green Corporate Real Estate Management (Green CREM) strategy developed by ABB in Germany. Launched in 2007, the Green CREM program has reduced energy consumption in our German real estate by 35,000 MWh and CO₂ emissions by 8,000 tons.

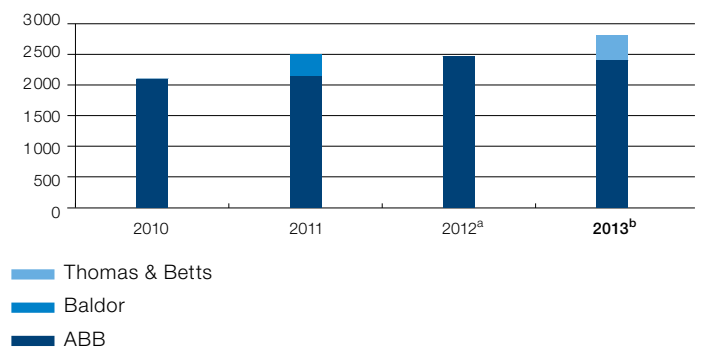
Megawatt-hours (MWh) per employee



^a Baldor facilities included; Thomas & Betts not included

^b Baldor and Thomas & Betts facilities included

Total energy use (Gigawatt-hours – GWh)



^a Baldor facilities are included; Thomas & Betts not included

^b Baldor and Thomas & Betts facilities included

Reducing carbon intensity of energy

As well as working to improve the efficiency of our energy consumption, ABB also seeks to reduce the carbon intensity of our energy sources. Around five percent, or 85 GWh, of ABB's 2013 electricity was purchased as certified "green" electricity, saving more than 18,000 tons of CO₂ emissions.

Additionally, more ABB facilities are installing on-site photovoltaic (PV) power plants to reduce environmental impacts as well as to demonstrate ABB's solar capabilities. PV plants are installed at 21 sites in 16 countries across Asia-Pacific, Latin America and Europe. Although the installations contribute only a small proportion of our global electricity needs, PV plants in Japan, Hungary and Mexico can contribute 50 percent or more of the installation's electricity needs.

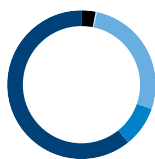
During 2013, ABB in Mexico was awarded the prestigious Mexican International Renewable Energy Congress (MIREC) Award 2012 for excellence in the development of clean energy. The award recognized ABB's leadership in clean energy, demonstrated by the photovoltaic solar field at our San Luis Potosi facility. ABB was the first private company in Mexico to invest in a photovoltaic solar field of utility-type dimensions. The solar field, commissioned in 2012, generates 1.2 megawatts (MW) and prevents annual emissions of around 1,700 tons of CO₂.

Greenhouse gas emissions

ABB's direct greenhouse gases (GHG) emissions are mainly from fuel used in our operations, as well as from SF₆ emissions during production processes and gas handling on site. Thanks to product and process re-design, as well on-going programs to improve handling, leak detection and storage, our SF₆ emissions declined by almost 20 percent in our ongoing operations. However, ABB's total direct GHG emissions remained relatively stable from 2012 to 2013, mainly due to the higher proportion of gas used as fuel at Thomas & Betts facilities. ABB's total GHG emissions (direct + indirect) increased slightly from 1.85 million tons in 2012 to 1.87 million tons in 2013.

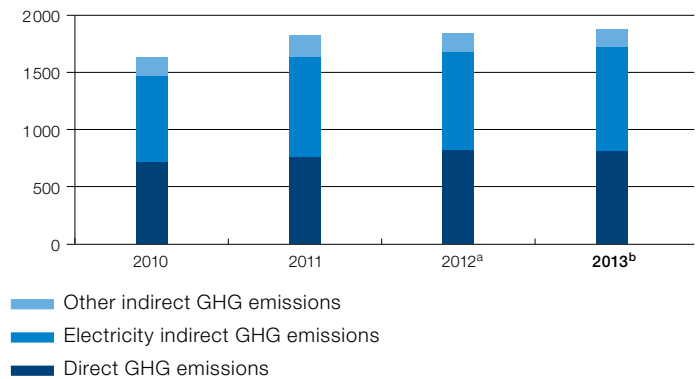
Direct and indirect energy use by type for 2013^a (2012^b)

- Oil **3.3%** (4%)
- Coal **0.1%** (0%)
- Gas **26.9%** (23%)
- District heat^c **8.9%** (9%)
- Electricity^c **60.7%** (65%)



^a Thomas & Betts facilities included
^b Thomas & Betts facilities not included
^c Not including losses at utilities

Greenhouse gas (GHG) emissions (kilotons CO₂ equivalents)



^a Baldor facilities included; Thomas & Betts not included
^b Baldor and Thomas & Betts facilities included

Logistics and travel

Programs to optimize logistics continued during 2013, resulting in cost savings, improved quality and reduced emissions. The largest program under way is the Transportation Management Center project in China. In the regions of Xiamen, Beijing and Shanghai, transport management for the local business units has been combined into a single operation and team. The regional teams integrate all domestic transportation needs, coordinating vendor, transport management center and factory through a unified operational process. The program will expand in 2014 to include international service from Shanghai and pilot projects at locations in India and Switzerland.

3.5% improvement in energy efficiency in 2013

We have also made significant progress with our global packaging optimization project. More than 70 facilities have now systematically reviewed their packaging needs and are assessing the potential to optimize packaging type, size and weight. Improved packaging and loading can increase transport efficiency, thus reducing emissions, cut material consumption, improve ergonomics and provide better product protection.

Greenhouse gas emissions from business air travel decreased by almost eight percent during 2013, not including Thomas & Betts activities. To support both emissions and cost reduction targets, many locations have implemented local improvement goals to replace a certain number of internal, face-to-face meetings with virtual meetings. This has been supported by investment in improved facilities and technologies for virtual meetings.

Safe and secure operations

Working to improve outcomes

The health and safety of our employees, contractors, customers and others affected by our activities is a top priority for ABB. We are committed to achieving excellence in Occupational Health and Safety (OHS) and are working to achieve this through both strategic, Group-led programs and business-specific initiatives.

The engagement and participation of people at all levels of our organization is critical to achieving our OHS goal of zero incidents. However, the diversity of our operations in many different locations also presents significant challenges.

Although many processes and best practices have been put in place in recent years to improve OHS performance, and progress has been made, our performance in 2013 was not acceptable. Seven people – all of them contractors – died during the year and 69 people were seriously injured while working for ABB.

The contractor fatalities were a tragic reminder that our safety work is never done. We are reinforcing our efforts to strengthen training in particular business areas, improve monitoring of working conditions at customer sites and ensure appropriate levels of responsibility and accountability within the company. At the same time, we continue with the long-term development and continuous improvement of our existing programs.

Competence development and OHS behaviors

Requirements for health and safety competence are embedded in ABB's OHS policy and procedures. The ABB OHS functional competency program underpins the policy, providing detailed definitions of the competency levels for all such jobs in ABB.

In 2013, we began an update of the OHS functional competency program – in line with a revised Group approach to competency development – to ensure the program continues to support ABB's business needs and requirements. The site management functional competency model was also updated during the year, strengthening health and safety requirements.

To ensure consistency of approach to health and safety and to reinforce accountability within the company, we have developed an OHS behavior standard. These behaviors represent universal, not job-specific requirements. We started to roll out the standard in 2013, holding workshops in South Africa and the United Arab Emirates to train assessors on how to evaluate baseline behaviors.

Beginning in 2014, all ABB employees will be required to include a health and safety behavioral goal in their annual objectives. The aim is to further embed positive OHS behaviors at all levels and to ensure that formal discussions of these behaviors occur across the company.

Programs and tools to support our strategy

During 2013, we introduced hazard reporting as a leading indicator throughout the Group to supplement the existing near miss reporting. By reporting and investigating near misses and hazards we are better able to address the risks in our business, understand the related root causes and reduce the chances of more serious incidents.

Business-led OHS programs continued to focus on the particular needs and activities of the different business units (BUs). For example, the Medium Voltage Products BU undertook OHS-specific risks training, running workshops for a total of 90 employees in Russia, China and Thailand. Thomas & Betts continued their integration activities, starting a program to implement OHSAS 18001 management systems at all facilities and training OHS advisors on global incident reporting procedures.

Development of the OHS strategy, standards and competency program for ABB's global Service organization progressed significantly during 2013, driven by a dedicated Group Service OHS Advisor. The Advisor is responsible for aligning Service OHS with ABB Group standards and coordinating activities throughout regional, country and BU service organizations.

In recognition of the value ABB's service customers place on strong OHS performance, we again acknowledged OHS leadership with our internal Global Service Award for Safety. The award-winning team created a learning zone on operational and service safety for service engineers in the United Arab Emirates. The learning zone is based on the findings of Service audits and accident investigations in various ABB business units, and consists of a practical training for service engineers and a standardized service safety kit.

At country level, OHS improvement programs are organized according to formal country OHS strategic plans prepared within our global priorities and framework. The country plans are tailored according to local conditions and business needs. Progress towards performance targets and implementation of training and development programs is monitored quarterly at Group level.

Occupational hygiene

Launched in 2012, the Group occupational hygiene program continued to develop during 2013. Regional training workshops for North America, South America and Asia-Pacific helped to build competency in our network of OHS Advisors. The Occupational Doctors Team, comprising eight doctors from all regions, continued to support the network by identifying and communicating good practices and developing a process for managing occupational diseases.

Injuries, lost days, diseases and fatalities

	2013 ^a	2012 ^b	2011	2010
Employee work-related fatalities	0	1	0	1
Incident rate	0	0.01	0	0.01
Employee work-related serious injuries	40	22	22	15
Incident rate	0.27	0.16	0.18	0.13
Employee business travel fatalities	0	1	0	2
Incident rate	0	0.01	0	0.02
Employee business travel serious injuries	4	0	3	5
Incident rate	0	0	0.02	0.04
Contractor work-related fatalities	7	2	0	2
Contractor work-related serious injuries	29	20	16	16
Contractor business travel fatalities	0	0	0	0
Members of the public fatalities	1	0	0	0
Employee lost days due to industrial incidents ^c	10,591	10,345	9,478	8,362
Employee occupational health diseases	10	10	7	13
Employee total recordable incident rate ^c	10.94	13.04	13.17	13.48
Employee lost time incident rate ^c	4.70	4.80	5.70	6.80

^a The indicators Employee work-related fatalities, Employee work-related serious injuries and incident rate, Employee lost days due to industrial incidents, Employee total recordable incident rate and Employee lost time incident rate include data from Thomas & Betts, a company acquired by ABB during 2012.

^b These data do not include incidents from Thomas & Betts, a company acquired by ABB during 2012.

^c Data includes incidents that happened at workplace (ABB facility, customer site, project site).

In these statistics, figures for fatalities also include deaths occurring within one year as a result of injuries sustained. Incident rates are according to the ILO rate per 1,000 employees. The total recordable incident rate includes the following incidents: serious injuries, lost time incidents, medical treatment injuries, occupational health diseases and restricted work day cases. "Lost days" are calendar days, and are counted from the day after the incident. Business travel incidents include injuries related to road travel. Incidents during air travel, on business trips, are excluded.

Secure operations

Our concern for the health and safety of our employees and contractors includes their security, particularly in high-risk countries or during crises.

In recent years, ABB has built up a security capability around the world designed to safeguard our people, protect our assets and meet our customers' needs - even in some of the most hostile environments.

Training people to know how to act and react under exceptional circumstances is key. Regular and mandatory security training sessions are held to ensure that teams of people at Group, regional and national level know how to behave in the event of a natural or man-made crisis.

Management teams in countries where ABB has operations and major projects receive crisis training every three years. Complementing these sessions is ongoing training on a wide range of other security tools and processes.

The nature of a crisis varies considerably and includes political unrest, terrorism, crime and natural catastrophes.



ABB experienced a number of crises in 2013. For example, as the political unrest unfolded in Egypt in mid-year, local managers and security specialists implemented established processes to assess rapidly-changing risks and developments, plan for the potential movement or evacuation of people, and review existing security requirements around ABB offices and production sites.

The ability to analyze fast-moving scenarios and, where possible, predict likely events is part of the capability of our corporate security staff. In an increasingly volatile world, such skills are essential to help protect our people and strengthen our business resilience.

Responsible sourcing

Learning from experience

ABB currently has thousands of active direct material and project service suppliers all over the world who represent an extension of our own enterprise. These suppliers are expected to follow the same standards as ABB with respect to fair and legal labor conditions, occupational health and safety, environmental responsibility and business ethics. These standards are defined in the ABB Supplier Code of Conduct.

The ABB Supplier Sustainability Development Program (SSDP) helps suppliers to live up to our Supplier Code of Conduct by raising awareness, helping them to comply with sustainability principles and incentivizing them to improve performance continuously. The program also builds our capacity to ensure that appropriate assistance can be provided to suppliers. Together, this moves us towards our goal to provide our customers with a competitive and sustainable supply chain.

We prioritize suppliers to participate in the program according to a risk matrix, which includes criticality of the supplier, country risk, commodity risk based on operations characteristics, and spend volume. The selected suppliers receive training about ABB's global requirements regarding sustainability standards and on practical ways to improve their performance. We then conduct sustainability assessments at the suppliers' premises to identify remaining gaps, and help suppliers to develop improvement plans. After that we assess the timely implementation of these plans. Read more about the program on our [website](#).

Strengthening processes

In 2013, we worked to strengthen support for our suppliers. The Supplier Code of Conduct was updated to provide more specific requirements around material compliance and procurement practices by our suppliers, as well as a new section to describe the channels through which suppliers can report any misconduct by ABB. We also released a detailed [Supplier Sustainability Implementation Guide](#), providing advice on best practices along with country-level information about relevant laws and standards.

Internally, a dashboard of SSDP key performance indicators was developed, implemented and is regularly updated, allowing performance tracking and analysis across business units, divisions and countries in all levels of our organization. This is helping us to identify geographies, businesses or elements of the program that need extra focus or support.

We also made good progress in rolling out our strengthened supplier pre-qualification process. Through a common platform, each direct material or project supplier must provide basic company information, while critical suppliers must complete a second stage, providing comprehensive informa-

150 supply chain sustainability assessments in 2013

tion covering finance, compliance, quality, corporate responsibility, environment and health and safety issues. During 2013, roll out commenced in Europe, North Asia, India and the Americas. About 30,000 suppliers are participating in this program worldwide. Full global coverage is scheduled by end of 2014.

Improving performance

Over the last three years we have trained around 1,800 ABB supply chain and quality experts (408 in 2013) and over 1,800 critical suppliers (630 in 2013). Our internal assessor training program, launched in Mexico in 2012, was extended to China in 2013 where 19 participants achieved third-party certification as supplier sustainability assessors.

Over the course of the year, we conducted 150 supplier sustainability assessments, focusing mainly on Brazil, China, India and Mexico. These assessments, on average, resulted in 14 corrective actions per supplier.

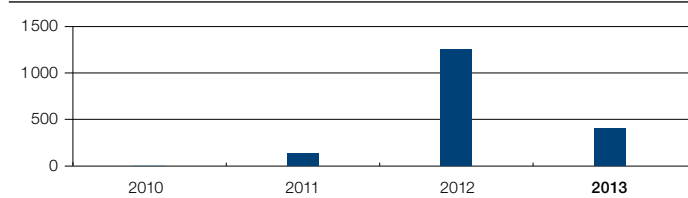
Twelve of the assessments were conducted in the Czech Republic to evaluate ABB's risk exposure with our main Eastern European suppliers. These assessments, however, did not reveal any critical findings and resulted in an average of only three corrective actions. Based on these encouraging results, the Czech Republic will no longer be in the focus of the SSDP moving forward.

Although supplier training programs are resulting in improved supplier performance, assessments continue to reveal situations where ABB's standards are not met. The most frequently identified root cause includes lack of knowledge of applicable labor, health, safety and environmental regulations, which can then result in unsafe working conditions, poor environmental practices and excessive overtime. The 10 most frequently identified non-compliance issues are shown at this [link](#).

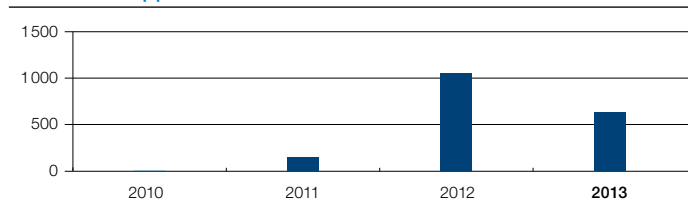
During the year, 14 suppliers were blocked due to unsatisfactory progress with their corrective action plans. One of the four suppliers blocked during 2012 closed their action plan and was allowed to return as an active supplier, bringing the total number of blocked suppliers to 17. We actively monitor global ABB spend with blocked suppliers to ensure that their blocked status is respected across divisions and geographies.

ABB supply chain staff also visited suppliers to our recently-

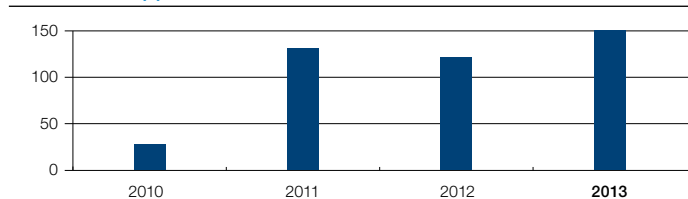
Number of ABB employees trained



Number of suppliers trained



Number of suppliers assessed



acquired companies. At one location, two cases of child labor were detected. Remedial action was taken immediately and no evidence of child labor was found during subsequent unannounced visits.

In addition to the SSDP, ABB's global sustainability network conducts environmental audits of suppliers, as part of our own facilities' ISO 14001 management systems. More than 1,100 documented environmental audits of suppliers were performed during 2013. Overall, 50 percent of more than 2,000 key suppliers are externally certified to ISO 14001 and a further 13 percent have implemented "self-declared" environmental management systems.

Challenges and different approaches

Now that the SSDP has been running and evolving for several years, we took the opportunity to review it during 2013 to see what lessons we have learned and what we could further improve.

From an internal perspective, we realized that the program is most effective in countries where there is strong local ownership of training, assessment and continual improvement processes and communication, rather than a strong reliance on the corporate offices. Therefore, we have taken action to strengthen and empower local supply chain sustainability teams, to formalize common Group standards and pro-

cesses that can be applied at local level and to provide common tools to assist in tracking program performance locally. Training programs have been diversified and customized, depending on needs.

We are also aware that some of the issues that surface during supplier assessments cannot simply be fixed by supplier training and improving management processes; they require real partnership between ABB and our suppliers to understand the root causes and it can take time to develop lasting solutions.

One such issue is excessive overtime. We have found that some suppliers consider extended working hours to be normal business practice, a necessity to meet production deadlines. In certain regions, suppliers' employees often rely on overtime pay as a necessary supplement to their normal wages and will move to another employer if their total working hours are reduced.



Through close work with our suppliers, we have found that redesign of work processes and workforce deployment can result in greater process efficiency, improved labor productivity and better allocation of skilled labor, improving business performance and reducing overtime requirements. For example, suppliers in India and Mexico have found that looking at their businesses with fresh eyes can change mindsets and help them to a safer, more equitable and more profitable future.

We are now focusing on preventive actions: engaging and training suppliers on this topic, communicating about the benefits of effective overtime control and also sharing supplier success stories.

Moving forward in 2014

The SSDP will continue to expand and develop in 2014. New focus countries, South Africa and Malaysia, will be added to the program, and we will also put a special focus on contractor safety development in Saudi Arabia. The internal SSDP assessor certification program, already operating in Mexico and China, will be launched in Brazil, India and South Africa. Communication of successes and challenges will increase and supplier support materials will be translated into local languages.

Our Supplier Sustainability Development Program is helping us to embed sustainability principles along our value chain. The results are encouraging, with many of our suppliers finding real business benefits in the program while improving their sustainability performance. However, new challenges arise and we will continue work on addressing them.



Right resources

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What we call “Right resources” covers both complying with regulations as a minimum, as well as our own improvement efforts to cut down on our use of natural resources, and reduce waste and the use of hazardous substances. Both are material to our success and are of significant interest to our stakeholders. Governments and customers are increasingly seeking information on how we source our resources as a condition for continued business; and the more we can reduce our use of natural resources like water and limit the use of hazardous substances in our manufacturing processes, the greater the benefit to our business, employees and society as a whole.

Resource efficiency

Reducing impacts

Our stakeholders have confirmed that ABB's operational efficiency – optimizing the use of resources and minimizing waste – is of significant interest to them. Addressing these issues also contributes to our business success by reducing costs and risks, improving the work environment for our employees and helping to maintain our license to operate.

14% cut in water use in water-scarce areas since 2011

Reducing impacts where it's most needed

Although our manufacturing processes do not consume significant amounts of water, ABB is nonetheless committed to reducing our impact on local water resources. In order to better understand the potential impacts, we have employed the World Business Council for Sustainable Development's Global Water Tool to map our water use relative to the renewable water resource availability in the countries and watersheds where we operate.

We have taken this analysis one step further and developed an in-house water tool for mapping and analysis of water flows at our facilities. The tool was rolled out during 2012 in a program targeting our manufacturing facilities in water-scarce and extremely water-scarce watersheds¹. These facilities, located in 15 countries across five continents, were required to systematically review water flows, analyze water-related opportunities and threats to their operations, and develop water action plans to minimize risks and to leverage opportunities.



The resulting action plans identified a wide range of opportunities to reduce impacts, including both behavioral and technical solutions. The most frequently described actions were the installation of aerators and low flow taps, identification of reuse opportunities for water from cooling systems and domestic uses, as well as awareness-raising and training programs. Many facilities have now installed flow meters to enable measurement of water use at key points and detection of leaks. This more detailed data helps to track performance improvement and to identify further improvement opportunities.

The program is already showing concrete results. Water use at facilities in water-scarce and extremely-scarce watersheds was reduced by 14 percent from 2011 to 2013. This delivers multiple “wins” – reducing water reduces both demand on a precious resource and the use of power to move water to and from our facilities – and it saves us money.

We have now also included Baldor and Thomas & Betts facilities in our mapping of ABB activities by watershed status. A total of 41 ABB sites are located in extremely water-scarce watersheds (of these, 6 are offices only) and 60 sites in water-scarce watersheds (of these, 13 are offices only). However, these sites account for less than 10 percent of ABB's global water withdrawals.

We will continue to monitor and support the implementation and periodic update of the water action plans and track performance via our environmental reporting process. As part of our activities to integrate acquired companies, we will work to introduce the ABB Water Tool and develop improvement plans at the relevant facilities.

Water in our global operations

Looking at ABB's global operations in 2013, nearly half of our water withdrawals (47 percent) were used for cooling processes, about a third used for domestic purposes such as sanitation, cooking or garden maintenance (32 percent) and the remainder for manufacturing processes (21 percent). None of our extractions caused significant changes to water sources during 2013.

Of those sites that use water for process purposes, more than 30 percent use closed-loop systems. Excluding cooling water returned to the source of extraction, the use of closed-loop processes and the reuse of water in other ways saved approximately 5.9 million tons of water in 2013. Without this recycling and reuse, ABB's water withdrawals would have been more than 50 percent higher.

About half of our water discharge was to public sewers (48 percent), with almost 25 percent of that volume first processed at our own treatment plants. Another 45 percent was discharged to surface or ground water, with 75 percent of that volume pre-treated. The remainder was handled by hazardous waste water treatment companies.

Waste and recycling

ABB products contain mostly steel, copper, aluminum, oil and plastics. The majority of this material is reclaimable at the end of the product's life and we enhance the ability to recycle by designing products that can be dismantled more easily and by providing users with recycling instructions.

¹ Food and Agriculture Organization of the United Nations (FAO) (2003). *Review of world water resources by country. Water Reports 23. Rome.* According to this methodology, a watershed is considered water-stressed if the total actual renewable water resources (TARWR) are below 1,700 m³ per person and year, water-scarce if below 1,000 and extremely water-scarce if below 500.

Consequently, the main waste streams at ABB facilities are metal, oil and plastic, as well as wood and cardboard from packaging materials and paper from office activities. We aim to optimize material use, increase the share of waste that is reused or recycled and reduce the absolute amount of waste sent for final disposal.

Compared with 2012, there was no significant change in the total volume of waste generated at ABB's ongoing operations in 2013, despite increased business volumes and plant refurbishments and consolidation.

Considering all of our businesses, in 2013 ABB sent 81 percent of total waste for recycling, compared with 82 percent in 2012. However, the absolute volume of waste sent for final disposal increased, due to the first-time incorporation of newly acquired businesses in our 2013 results.

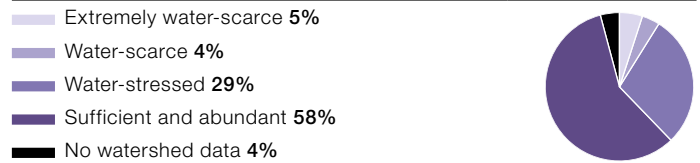
In-house recycling, mainly of packaging materials and thermoplastics, reduced the amount of waste by 3,900 tons. In total, we generated about 12,000 tons of hazardous waste in 2013, but sent almost 40 percent of that amount for recycling rather than disposal.

ABB operations undertake a wide range of waste reduction and recycling initiatives, bringing both environmental and cost benefits for the business. The nature of the improvement activities generally depends on the characteristics of the production processes and the local waste infrastructure. However, common themes emerge.

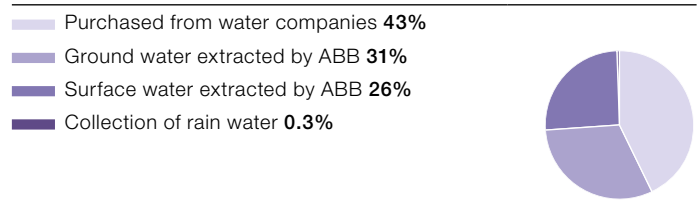
As a first step, many locations focus on awareness building and on ensuring processes are designed to support material efficiency and appropriate waste sorting for recycling. Process improvements can range from changing purchasing practices to encourage the supply of goods in bulk containers, thus reducing packaging waste, to improving inventory management of perishable goods, thus minimizing the disposal of expired materials. These good practices are also being implemented in many of our canteens where the focus is on reducing the supply of water in plastic bottles, better management of food waste and increased recycling.

During 2013, a number of our operations invested in novel processes to reduce or reuse waste. For example, a plant in the Czech Republic created a new type of compression mold to enable production of a component from recycled plastic. Our drives repair business in France implemented a new "biological fountain" to clean the electrical equipment. The new process uses micro-organisms rather than chemicals as cleaning agents, reducing hazardous waste generation by more than four tons in 2013.

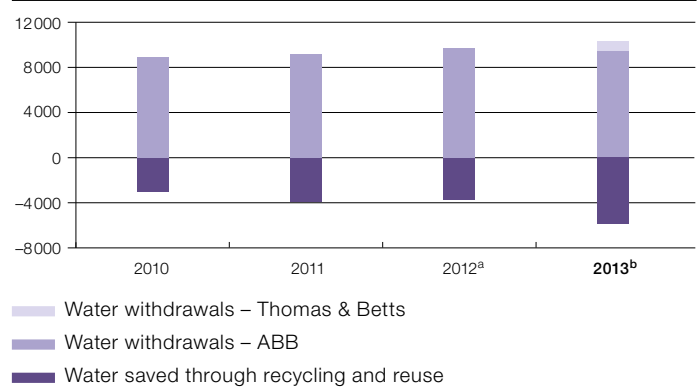
Water withdrawal 2013 per watershed status



Sources of water withdrawals in 2013



Water with drawals and water reused/recycled (kilotons)



^a Baldor facilities are included; Thomas & Betts not included.
^b Baldor and Thomas & Betts facilities included.

Waste and recycling (kilotons)



^a Baldor facilities are included; Thomas & Betts not included.

^b Baldor and Thomas & Betts facilities included. New category introduced - "Hazardous waste sorted and sent for recycling". Previously included in "Hazardous waste sent for disposal".

Right materials

Promoting responsibility along the value chain

ABB is committed to minimizing our environmental impacts and to ensuring the health, safety and protection of people who come into contact with our products and business. This requires attention to product design and manufacturing processes, as well to our supply chain, to ensure that the materials and components we use and the products we produce comply with our own and our stakeholders' standards.

Improvement by design

When it comes to product and technology development in any part of the ABB Group, we use a process we call the ABB Gate Model. This decision model defines a series of gates, or decision points, to determine whether or not the project should continue. The intention is to ensure appropriate consideration of all aspects needed to satisfy the project's defined objectives. These include consideration of legal, technical, strategic, manufacturing, customer and other requirements.

Sustainability aspects are built into the Gate Model and include a standardized Life Cycle Assessment (LCA) procedure and a handbook to guide consideration of environmental, and health and safety aspects during design. These aspects include how to:

- reduce the use of hazardous substances,
- assure compliance with relevant laws and regulations,
- avoid environmental and health risks during product manufacturing and operation,
- minimize consumption of resources,
- design for recycling and easy end-of-life treatment.

We have developed support materials such as checklists and training packages for our research technologists to improve understanding and ensure sustainability aspects are incorporated into design.



In 2013, ABB's Corporate Research Center (CRC) in Sweden decided to take this a step further and established an award for "Green Project of the Year". The award was established to increase awareness at the CRC of the breadth of environmental aspects that technologists can influence through product and process design and elicited entries covering a wide range of technologies.

LCA is not only required as part of a product's research and development phase, it is also used in the concept development phase for next generation products. ABB develops Environmental Product Declarations to communicate the environmental performance of our core products over their life cycle. Declarations are based on LCA studies, created according to the international standard ISO/TR 14025. More than 80 declarations for major product lines are published on our [website](#).

11% reduction in Volatile Organic Compounds (VOC) emissions in 2013

Reduction of hazardous substances

ABB continues to phase out hazardous substances in products and processes, where technically and economically feasible. We have compiled lists of prohibited and restricted substances to guide this process and update them regularly, in line with international regulations. These lists help our engineers, our suppliers and other partners like OEMs to comply with regulatory requirements, ensure a high level of protection for human health and the environment, and manage risks encountered by chemicals present in various products.

Our suppliers are requested to comply with these regulations, which are also part of ABB's Global Terms and Conditions and Supplier Code of Conduct. We have developed a [Guide for Suppliers to the ABB List of Prohibited and Restricted Substances](#) to support our suppliers to understand and implement the ABB List and to provide guidance on our suppliers' obligations.

ABB facilities are required to ensure compliance with the ABB List and to work to phase out hazardous substances in their processes and products. These programs are showing results, with significant reductions in the use of substances such as phthalates, used as a softener in PVC, and almost complete elimination of organic lead in polymers. Other activities are targeting, for example, elimination of solder containing lead and the substitution of various chemicals used in metal cleaning processes.

With the integration of our recent acquisitions, Baldor Electric Company and Thomas & Betts, we are seeing changes in the profiles of hazardous substances used on sites and in products due to different processes and product ranges. In particular, we have seen an increase in lead and cadmium in batteries delivered to customers and in polybrominated flame retardants used in polymers. We are working together to ensure implementation of the ABB List and to develop improvement programs.

Alongside plant-specific schemes, global Business Unit (BU) focus programs continue. The most extensive of these programs is an initiative to reduce Volatile Organic Compounds (VOCs) in the Transformers BU of our Power Products division. The goal of the initiative is to reduce the solvent emissions from painting across the complete manufacturing spectrum of the BU.



The program involves 62 factories in 27 countries and targets the reduction of VOC emissions by almost 300 tons, equivalent to the yearly VOC emission of 25,000 cars. Besides reducing emissions, this program has helped standardize paint operations and improve paint quality – benefits for our customers, our business and the environment.

Promoting material compliance

Stricter legal frameworks have been put in place worldwide, which means ABB is required to monitor the source of certain minerals more closely, as well as to phase out the use of hazardous substances in our products and processes.

ABB is aware of and concerned by the conflicts occurring in the Democratic Republic of the Congo. We are actively working to identify which products and material from suppliers may contain conflict minerals and are engaging with our customers regarding their disclosure obligations.

Like many other companies tracing conflict minerals, it will take time for a company of our size and complexity to collect the information needed for us to fully understand our use of conflict minerals and therefore be able to address related customer concerns.

Use of hazardous substances (tons)

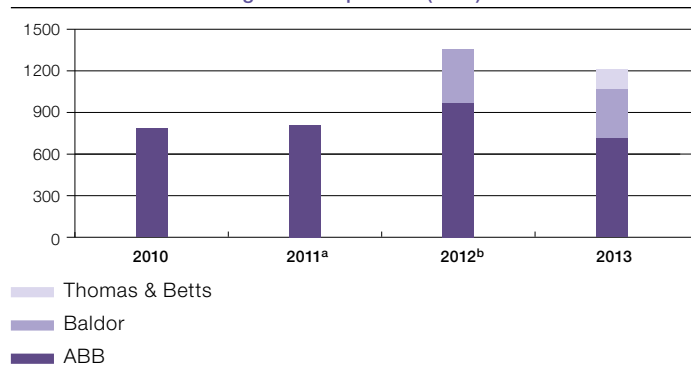
	2013 ^a	2012 ^b	2011 ^c
Phthalates – softener for PVC	21	28	47
PBB and PBDE – flame retardants	2.9	~0	~0
Lead in submarine cables	7,236	5,633	5,725
Organic lead in polymers	0.6	0.9	1.3
Lead in other products, e.g. backup batteries and counter-weights in robots	2,601	363	227
Cadmium in industrial batteries delivered to customers	4.4	5.6	1.6
Cadmium in rechargeable batteries	67.6	6.3	10
Cadmium in lead alloy and other uses	5.7	4.5	4.3
Mercury in products delivered to customers	0.012	0.011	0.030
SF ₆ insulation gas (inflow to ABB)	1,438	1,139	1,052
SF ₆ insulation gas (outflow from ABB)	1,425	1,118	1,040

^a Baldor and Thomas & Betts facilities included

^b Baldor facilities included; Thomas & Betts not included

^c Baldor facilities not included

Emissions of volatile organic compounds (tons)



^a Baldor facilities not included

^b Baldor facilities included; Thomas & Betts not included