

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.

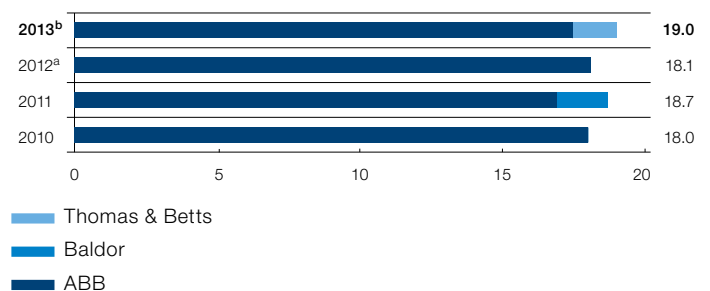
Building an efficient real estate portfolio

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.

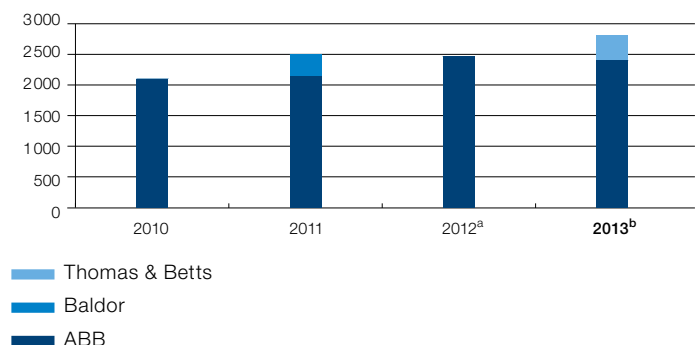
Megawatt-hours (MWh) per employee



^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.

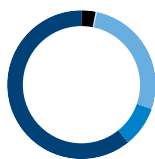
During 2013, ABB in Mexico was awarded the prestigious Mexican International Renewable Energy Congress (MIREC) Award 2012 for excellence in the development of clean energy. The award recognized ABB's leadership in clean energy, demonstrated by the photovoltaic solar field at our San Luis Potosi facility. 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.

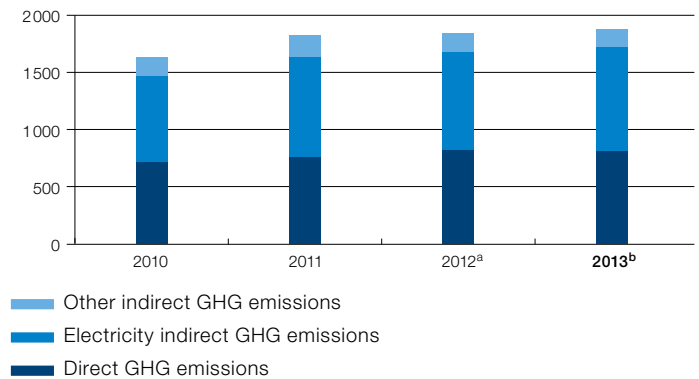
Direct and indirect energy use by type for 2013^a (2012^b)

- 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.

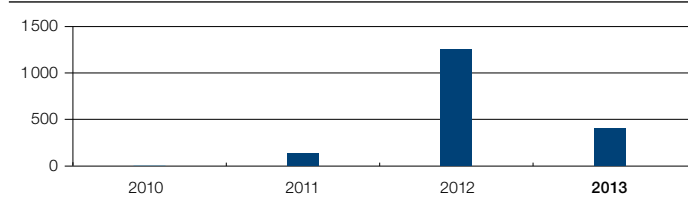
Twelve of the assessments were conducted in the Czech Republic to evaluate ABB's risk exposure with our main Eastern European suppliers. These assessments, however, did not reveal any critical findings and resulted in an average of only three corrective actions. Based on these encouraging results, the 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](#).

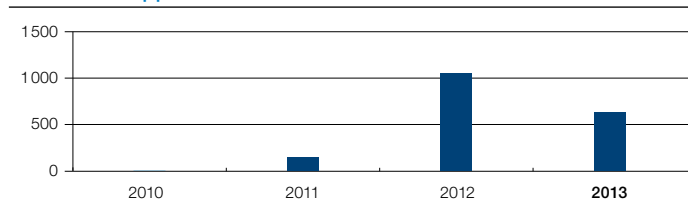
During the year, 14 suppliers were blocked due to unsatisfactory progress with their corrective action plans. One of the four suppliers blocked during 2012 closed their action plan and was allowed to return as an active supplier, bringing the total number of blocked suppliers to 17. We actively monitor 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-

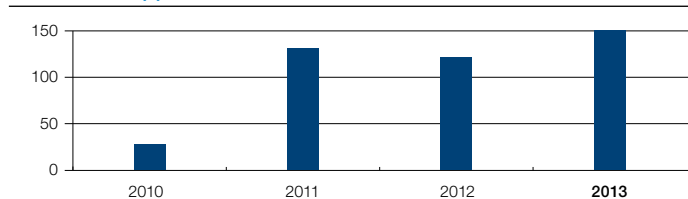
Number of ABB employees trained



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.

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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.