

In ABB, sustainability is an important part of our business. Our products and systems are designed to make our customers more competitive and more sustainable by helping to increase energy efficiency, industrial productivity and the reliability of processes and systems of all sizes, even very large infrastructure systems such as power grids.

ABB is committed to sustainability and in this article we outline how we meet the expectations of our customers, shareholders, employees and society.

An essential part of our business
Anders H. Nordström

Sustainability in ABB



Over the last decade sustainable development has become more and more important on all levels and in all sectors of society. Sustainability concerns everyone, not only decision makers and there is good reason to believe this trend will increase over the next few years. Governments, businesses and people must develop strategies and find ways of making our societies more sustainable.

But first it is important to identify the global challenges for sustainable development today. The list of challenges will more than likely vary depending on your perspective and how you value different social, environmental and economic aspects. Most people would agree, however, that the common denominators on most lists would include: saving natural resources, mitigation of global climate change, and meeting the challenges addressed in the United Nations Millennium Development Goals (such as poverty, water supply, child mortality) [see textbox 1](#).

How can we as individuals, corporations and members of society contribute to the solution? First and foremost, we need to assess the challenges and ensure that relevant action is taken in areas where we can influence and make an impact. Engaging in areas where actions have no or low impact is meaningless and a waste of resources.

But one thing is for sure, all true efforts for sustainable development, no matter how big or small, are unified by their sincere contribution to securing a common future.

Sustainability at ABB

ABB is dedicated to fulfilling stakeholders' (customers, shareholders, employees and society) expectations with regard to our economic, social and environmental performance. It is our responsibility to identify and act on major sustainability challenges that are specific to our industry. Sustainable development is more and more an integral part of all our processes from supply, transport, manufacturing, and research and development, to our day-to-day commercial operations and contacts with our customers. The company offers a broad range of products and systems that help customers improve performance while lowering their environmental impact. In addition, we engage in the con-

1 G8 focuses on Africa and climate change in 2005

The main themes for the G8 – the group of the eight leading economies in the world – in 2005 are Africa and climate change. Both are pressing issues for the world. Africa demands particular attention as the world's poorest continent. Climate change is happening and should be of concern for all.

The G8 Africa Plan contains commitments on promoting peace and security; strengthening institutions and governance; fostering trade, economic growth and sustainable development; implementing debt relief; and improving water resource management.

The G8 accounts for over 65 percent of global GDP and 47 percent of global CO₂ emissions. Its members also play a major role in technological development and scientific effort globally.

The UK presidency of the G8 wants to raise the profile of climate change as a matter deserving the urgent attention of Heads of Government in the G8 and outside it, so as to promote an international consensus on the need for further action to control emissions.

Source: www.g8.gov.uk

cerns of the communities where we operate and look for adequate ways to relate to the major global issues.

ABB's environmental performance has reached a high and consistent level [1](#). Environmental management systems are well established at all our manufacturing sites, as well as in many non-manufacturing sites. Our global sustainability network covers 48 countries and regions and a web-based reporting system gives us full control over waste, emissions and the flow of material throughout the company. As part of its corporate objective, ABB is currently focused on phasing out the use of hazardous substances in our manufacturing [see textbox 2](#).

Sustainability is fully integrated into ABB's product development. Environ-

2 ABB in the sustainability performance ratings

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

ABB is highly ranked by institutions like Dow Jones sustainability Indices (DJSI); FTSE4Good; Business in the Environment (BiE); Sarasin Bank; SiRi Company; Swedish Environment Fund; Innovset.

For details see: www.abb.com/sustainability

mental guidelines and tools for Life Cycle Assessment (LCA) are readily available on the group's intranet. Over the years, more than 100 LCA studies have been made and many have formed the basis for Environmental Product Declarations (EPD) that inform customers about a product's environmental performance. A lifecycle perspective that covers the whole industrial process – from design and material selection to waste management – is required in all product development.

Sustainability concerns everyone, not only decision makers.

In ABB, our sustainability focus – in particular with regard to policies and activities – is sharpened through regular contact and dialogue with our stakeholders. In 2004, stakeholder dialogues were held at a corporate level as well as in 19 of our major countries. We also facilitate ongoing consultation with employees all over the world.

Occupational health and safety, particularly within the ABB group is a priority. In 2004, ABB committed considerable resources in ensuring the implementation of the internationally recognized OHSAS 18001 management standards in all units throughout the group. At present, the focus is on dramatically reducing incident rates and achieving world-class safety in the workplace while the future will focus

somewhat on actively helping to improve the general health of our employees.

ABB requires social performance criteria from its suppliers and to determine if suppliers to the company can fulfill defined minimum standards, a Supplier Qualification Process (SQP) was developed. The SQP is now implemented in national as well as in group purchasing contracts and our main suppliers are encouraged to follow the principles laid out in the company's environmental, social, and health and safety policies.

Access to electricity and other modern energy services is a key enabler in the global fight against poverty. Astonishingly, 1.6 billion people in developing countries currently live without electricity. Providing power to the people without destroying the planet has become one of the biggest challenges of modern times. ABB has, in collaboration with UN organizations, governmental and non-governmental organizations (NGOs) and industry partners, taken on part of this challenge. Through our "Access to Electricity" project, we are developing and implementing business models for the electrification and sustainable development of poor rural and semi-urban societies [1].

On top of this, we are learning how to effectively integrate human rights

aspects into our global business activities. ABB is one of the initiators of the Business Leaders' Initiative on Human Rights (BLIHR), a three-year program which serves to lead and develop the corporate response to human rights. Together with other companies, we are developing practical ways of applying the aspirations of the Universal Declaration of Human Rights in our businesses and are seeking to inspire other businesses to do likewise.

Access to electricity and other modern energy services is a key enabler in the global fight against poverty. Astonishingly, 1.6 billion people in developing countries currently live without electricity.

Bad business ethics is one of the largest obstacles to development. It has been estimated that some 25–30 percent of all development funding does not reach its intended beneficiaries due to unethical behavior. ABB's policy of zero tolerance on non-compliance in business ethics belongs to our core set of values and guiding principles. These values are

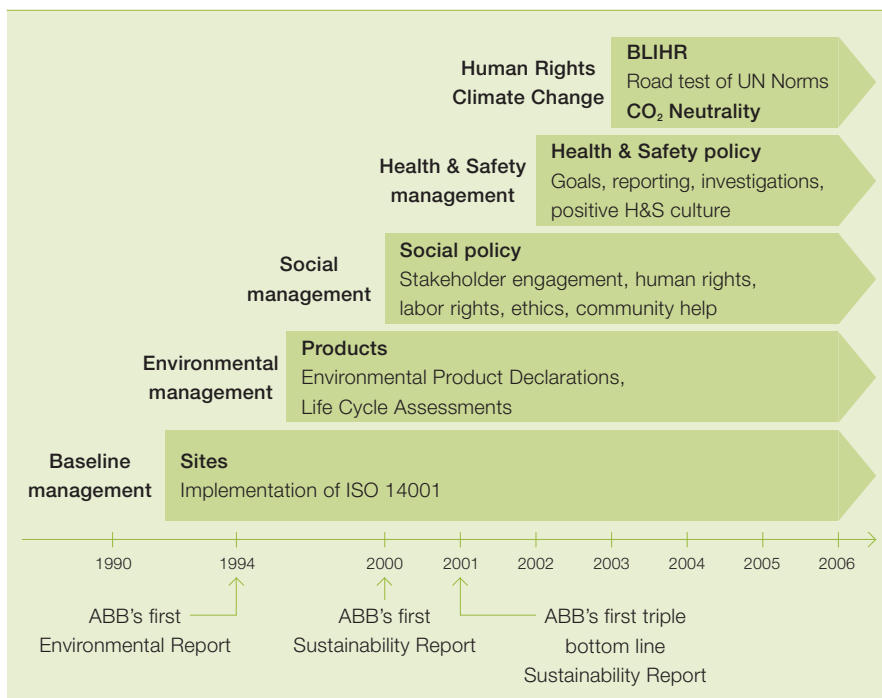
equally important in all countries and we conduct a rigorous compliance program worldwide to promote and enforce the policy. ABB's brochure on business ethics is available in many languages and has been distributed throughout the group and to stakeholders all over the world.

Climate change – a challenge for industry

Climate change is one of the largest challenges facing the world today [2], and changes in energy consumer behavior are urgently needed [see textbox 3](#). All actors in society need to contribute to the solution of this problem. The switching of the energy system is a long-term issue that will take some 50–100 years; no one is entirely sure what energy system will be in place once we have exhausted our supply of fossil fuels after the gas bridging era. However, there are actions that can now be taken to reduce greenhouse gas emissions:

- *Savings come first:* energy conservation measures and demand-side management should be stimulated.
- *Reshape energy systems:* enhance the contribution of renewable sources and CO₂ free power generation.
- *Getting the incentives right:* regulatory frameworks, subsidies, taxes, trading schemes and carbon quotas should work together to limit emissions.

1 ABB's road to sustainability.



3 Reducing CO₂ emissions by energy savings

According to the Intergovernmental Panel on Climate Change (IPCC) there are sufficient technical options to hold annual global greenhouse gas emissions through 2010 to levels close to or even below those of 2000.

Large savings can be made in the building sector and in industry, with regard to energy and material efficiency,

In the building sector most reductions are available at negative net direct cost. In industry it is estimated that more than half of the savings are available at negative direct cost.

- *Raise awareness and educate* the general public to change consumer patterns.
- *Promote* existing cutting-edge energy efficient technologies.
- *Strengthen support for research and development* on energy issues and launch technology development and deployment schemes in the market-place to speed-up technology change.

Businesses must address the climate challenge and take action on the issues outlined above. However, the main contribution businesses can make is to readily innovate and develop products and systems that meet the demands of the carbon-constrained world. Businesses can also contribute by setting challenging but achievable goals for its CO₂ emissions and use of energy, and possibly seek to compensate for its emissions. The transfer of modern low-emission technology to production facilities in developing countries would also contribute, as would working with suppliers to minimize CO₂ emissions in the supply chain. Ultimately, businesses should have a vision of zero emissions and zero waste.

Energy management and industrial safety

Since the oil crises in the early 1970s, energy efficiency has improved considerably in all sectors of society. In developed countries it now takes

30 percent less energy to produce a unit of GDP. Energy efficiency has increased especially in the manufacturing sector. The trend weakened, however, in the 1990s because of low and stable energy prices and as a result, energy management became a low priority issue in many companies. The cost of energy was viewed as a small part of the overall costs and was therefore sometimes neglected in the optimization of core processes and the use of raw materials. Today, the situation is quite different. Energy prices are rising and, on average, prices are expected to follow a long-term upward trend. Global concerns about climate change and the impact of CO₂ emissions from the burning of fossil fuels strengthen the case for energy management and energy efficiency.

The enforcement of the Kyoto Protocol and the start of the Emission Trading System in the European Union – covering about 12,000 industry and energy production sites – set a price on CO₂ emissions and gives an extra incentive for energy management.

Energy efficiency and energy management is the business of ABB. The interconnection of grid systems using HVDC and HVDC Light technology enables large savings through load pooling, economies of scale and optimal use of primary energy sources, which in turn reduce CO₂ emissions.

Performance monitoring equipment, such as Optimax™ and Combustion Optimizer, improve the operation efficiency of many utilities and individual power plants around the globe. Energy efficient drives systems for electric motors, together with advanced control systems, dramatically reduce the energy consumption of ventilation and pumping systems, in some cases by as much as 75 percent. In addition, replacing diesel engines with 25–50 percent efficiency by electric motors with an efficiency of more than 95 percent also has a large impact.

Industrial safety is also the business of ABB. We offer: products and systems that define the frontline of quality and safety requirements; user-friendly control and automation systems and solutions that secure world class availability; and productivity without unplanned interruptions. Safety management strengthens the competitive edge of our customers. In the short term, it is useful to determine weak points in products and processes and to improve them. In the medium to long term, these improvements boost profitability.

This issue of ABB Review is devoted to Energy Management and Industrial Safety. At the heart of these issues are the safeguarding of economic, environmental and human resources and assets – covering all three dimensions of sustainable development.



Anders H. Nordström

ABB AB, Corporate Research
Sustainability Affairs
Västerås, Sweden
Anders.h.nordstrom@se.abb.com

Reference

- [1] Nordström, Anders H.; Kornevall, Christian, "Power to the people in Southern Tanzania", ABB Review, Issue 4/2004, pp 20–24.
- [2] Philibert, Cédéric; Pershing, Jonathan, "Beyond Kyoto, Energy Dynamics and climate stabilization", International Energy Agency (IEA), 2002.