

Proven technologies for the vital issues of our time



World leaders reached several crucial global agreements in 2015 designed to safeguard the sustainable development of the planet. ABB is already contributing towards achieving some of the core goals of the Paris climate conference and the Sustainable Development Goals, and we will do more because they are vital to our future.

These global agreements highlight the major environmental and social challenges we face, and provide a clear signpost to the future.

Attending the Paris conference, I made it clear that proven technologies and solutions already exist to improve energy efficiency and to enable the scale-up of renewable energy, both of which help to mitigate greenhouse gas emissions. To support these efforts, we still need more robust and consistent political and regulatory frameworks.

ABB's greatest contribution to the reduction of greenhouse gas emissions has been and will be through our energy-efficient and renewable energy products, systems and services that increase our customers' productivity while lowering the impact on the environment.

Take energy-efficient motors as an example of the difference we can make. Tens of millions of electric motors operate machines, fans, compressors and pumps worldwide, consuming about 28 percent of all electricity, and yet only around 10 percent of these motors are equipped with drives which would allow them to adjust their speed and operate more efficiently, reducing power consumption, emissions and costs.

ABB's variable speed drives produce energy savings in motors of 20-50 percent with relatively quick pay-back time, and our installed base saves about 490 terawatt-hours of electricity annually or the consumption of 120 million European Union households.

This is low-hanging fruit with the technology available now; if supported by the global introduction of common and stringent Minimum Energy Performance Standards, covering the energy efficiency of all products, global energy consumption could be cut by 9 percent, according to a study by the European Commission.

Our collaboration over the past year in the United Nations Sustainable Energy for All initiative – where we are inputting advice on energy-efficient motors and distribution transformers – highlights our desire to see lower emissions and new performance standards.

On the supply side, ABB is a global leader in supporting the generation and transmission of energy from renewable sources. Renewables form an increasing share of the energy mix and, in some countries, make an important contribution to meeting ambitious carbon reduction targets.

But expanding wind and solar power generation capacity is not sufficient on its own. To ensure the reliability of energy supply, the growth of renewable generation must go hand-in-hand with investment in technology to integrate their valuable, but intermittent, output into the grid.

ABB has continued to make advances in the high-voltage direct current technology we pioneered 60 years ago so that massive amounts of clean energy – produced by solar, wind or hydro generation - can be transmitted over long distances with minimal losses.

The ability to ensure reliable integration of renewables into the grid was reflected in key orders in 2015. In China, for example, we won orders for two ultrahigh-voltage links, both able to transmit 8,000 megawatts of wind and solar power, which will meet the electricity needs of 26 million people. And in India, we energized the first phase of an electricity “superhighway” supplying clean hydro-electric power from the Himalayas to Agra, which will serve some 90 million people.

We also see opportunities for greater deployment of low-carbon microgrids to bring clean energy – generated by solar or wind - to millions of people in remote communities, particularly in Africa and South Asia, who have no access to electricity. We know from our existing projects how distributed energy solutions can lead at the community level to economic progress, improvements to health and education, and better management of the local environment.

The deployment of such technologies support the aims both of the Paris Agreement and of some core elements of the Sustainable Development Goals. For example, ABB is delivering solutions to ensure access to affordable, reliable, sustainable and modern energy for all (Goal 7) through our innovative products and systems which focus on energy efficiency, renewable energy, and sustainable transport and infrastructure development.

As already mentioned we are focusing through our business on efforts to mitigate climate change (Goal 13). We are similarly well positioned to help build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation (Goal 9). This is also part of our core business. Our community programs, concentrating on health and education, are already supporting two of the other main goals.

These efforts are also a reflection of our sustainability objectives, introduced in 2014 in full alignment with our Next Level corporate strategy. We are targeting greater energy and resource efficiency, and societal benefits through our business activities and community programs. We review our contributions and progress later in this report.

We also face challenges in different parts of the sustainability agenda. We have seen ongoing improvement in health and safety performance as a result of a sustained Group-wide campaign. But the results are still not good enough, and we

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must continue to work towards a zero target of injuries and fatalities. We also face social challenges – attracting, developing and retaining top people, ensuring that our operations benefit and do not detract from the welfare of communities, and safeguarding our people and assets in a volatile world.

Collaboration is key to these efforts. We need the support of our stakeholders – customers, investors and governments, as well as our own employees and representatives of civil society – to meet the great challenges we all face. The business and sustainability agendas have never been more closely inter-linked. The success of one is unthinkable without the other.

Within ABB I often speak of the need to work and move forward together. The international agreements reached this year, as well as the crises we have faced around the globe, have highlighted the need for broader, innovative thinking and collaboration to meet the increasing challenges to society and our environment.



Ulrich Spiesshofer
CEO