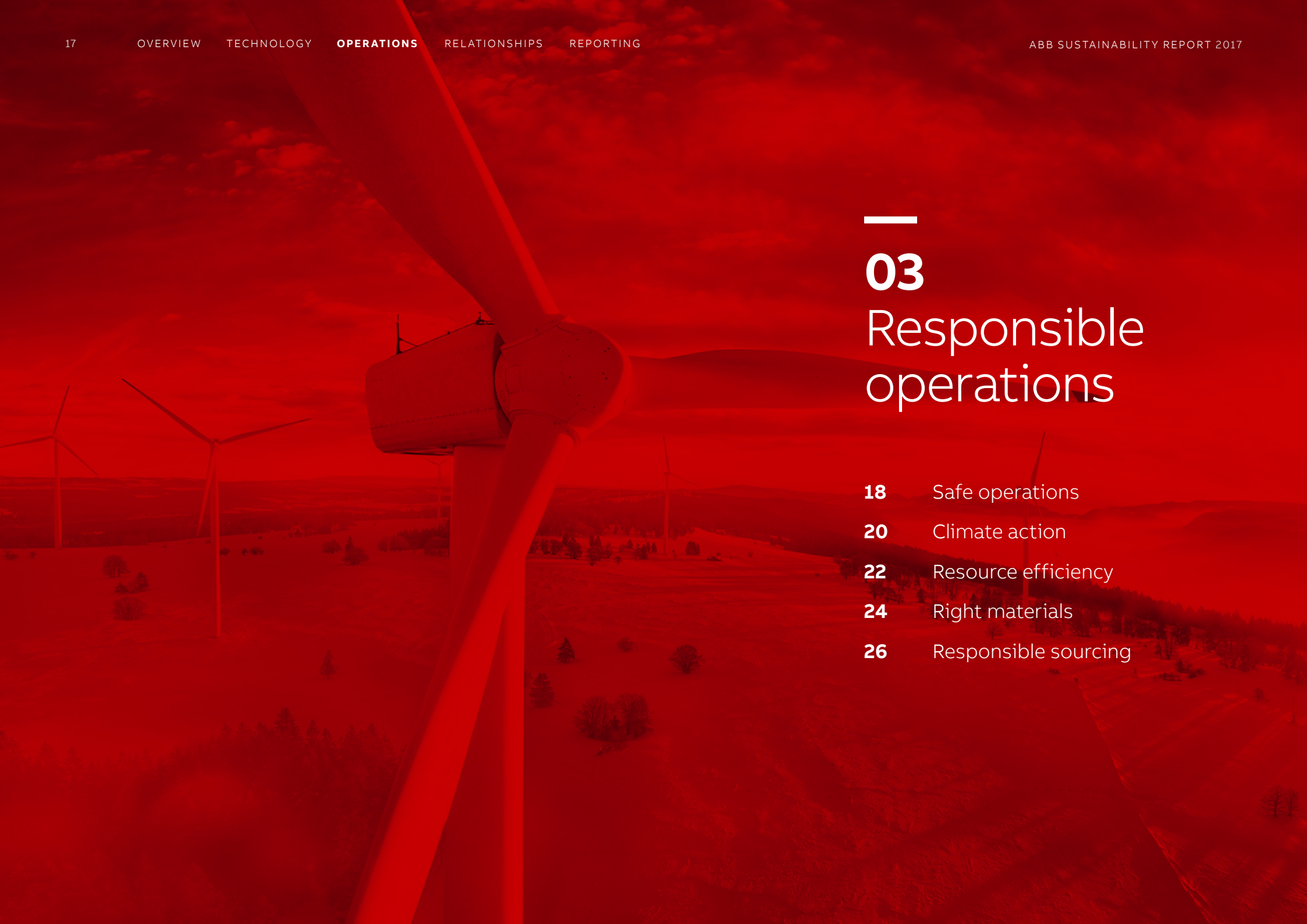

03 Responsible operations

SAFE OPERATIONS

Working to eliminate workplace incidents altogether

Safety and security are embedded in ABB's values and explicit in its policies

We apply best practices in safeguarding our personnel, contractors and other third parties, while we do the utmost to protect our assets, the resilience of our business, and our reputation.

Safety at ABB is a line responsibility, and we do everything to ensure our managers and our people have the skills, knowledge and resources to fulfill this responsibility. Our annual plans, developed to reflect our business needs, always demonstrate our commitment to safety. Likewise, we have put in place extensive security programs to mitigate travel- and work-related risks and we continue to strengthen ABB's resilience by providing training to crisis management task forces at site, country and regional levels.

0.73
TRIFR rate at the end of 2017

In 2017, we refined ABB's 2020 targets for safety and security into a single metric – the employee total recordable injury frequency rate (TRIFR)*. Our immediate goal is to reduce TRIFR, the most comprehensive and reliable lagging measure of our safety performance, to less than 0.7 by 2020. While we continue to maintain many other safety and security indicators across our operations, we made this change in order to maintain our sharp focus on reducing injuries.

We have performed well in this regard; at the end of 2017 our TRIFR stood at 0.73. This equates to 91 fewer incidents than were recorded in 2016, an 8 percent improvement. Over the past five years, our program has delivered consistent reductions to ABB's incident rate, and we have improved our TRIFR by 37 percent since 2013. Because no TRIFR rate above zero can be considered acceptable, we remain committed to eliminating incidents altogether and are well positioned to meet our 2020 target. To this end, we expanded our Safety Masterclass to ensure our leaders have the necessary information, skills and tools to prioritize safety on a daily basis. We also improved our investigation processes, focusing on high-potential incidents to determine how to take action before people are injured.

Despite the sustained progress towards our key safety indicator, one employee and two contractors died during 2017 while working on our behalf. The incidents highlighted the importance of our arrangements for working with contractors and with electricity. Our recently introduced accountability framework increasingly ensures that all categories of contractors are incorporated within our control framework and, following on

* The number of recorded incidents multiplied by 200,000/total hours worked.

from our work on electrical safety training in 2017, we are reinforcing and adding specialist resources to our electrical safety network, building enhanced global support to our businesses in this critical area of safety.

In 2017, we introduced the "ABB Way," a single Group management system for health, safety and environment (HSE), security and corporate responsibility. This project, our most significant HSE initiative of the year, updated and extended all our control standards for safety. The ABB Way also incorporates, for the first time, a complete ISO-compliant HSE management system. The ABB Way will be implemented across our business over the next two years, simplifying our approach and improving our shared knowledge and understanding of safety requirements.

HSE lead managers have been assigned to every ABB facility to ensure that HSE responsibilities are delegated across all our sites. Over the past year, we have established more than 50 formal country HSE and sustainability boards to uphold good governance and assure compliance with local legislation, liability requirements, ABB's standards and customer expectations.

In 2017 we worked with the business continuity teams of the newly established shared service centers to align their emergency and crisis response procedures with ABB's overall crisis management processes. The four main hubs in Xiamen, Bangalore, Kraków/Tallinn and San Luis Potosi underwent crisis scenario training with representatives from their respective country crisis taskforces to test the plans.

Case study
Person In Charge of Work
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CLIMATE ACTION

Contributing to climate goals with pioneering technologies

ABB understands the consequences of climate change and is committed to decarbonizing its own operations

We support the Paris Agreement, which came into force in November 2016, and consider it a critical opportunity to limit global warming and avert the potentially devastating consequences of climate change. We are committed to reducing our own greenhouse gas (GHG) emissions, stemming both from our use of energy and transport and from the handling of sulfur hexafluoride gas (SF_6).

ABB is also an active participant in the United Nations-driven "Sustainable Energy for All" initiative, which is working towards the goal of providing affordable, reliable and sustainable energy for everyone on the planet. The company is contributing to climate goals with pioneering technologies that enable utilities, industry and transport & infrastructure customers to improve their energy efficiency and operational performance while reducing waste.

In 2017, we refined the 2020 measures and targets for climate action at ABB. Going forward, our new target is to reduce our GHG emissions by 40 percent by 2020 vs a 2013 baseline. We made this change because we wanted to clearly demonstrate our commitment, drive action across all of our operations, and show the impacts of our efforts.

We performed well towards our 2020 target over the past year, as ABB's total GHG emissions (scope 1 + 2) decreased to 1.03 million tons. This 25.5 percent reduction includes a methodology change in how we monitor emissions from our vehicle fleet. Without this change, our emissions reduction for 2017 would have been 4.6 percent, similar to reductions achieved in 2015 and 2016.

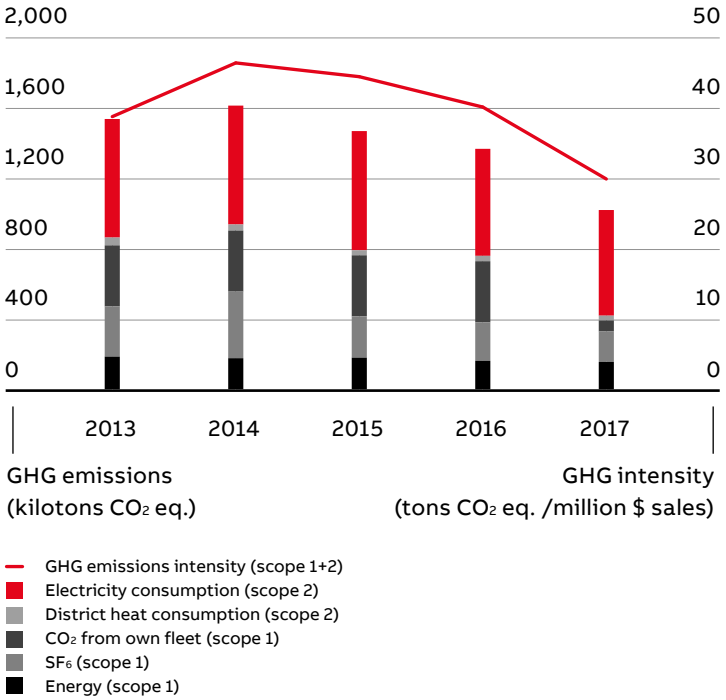
Our emissions of SF_6 from production processes and gas handling continued to decrease in 2017, amounting to a nearly 40 percent reduction from 2013. Measures to improve handling, leak detection and storage procedures for the gas have been undertaken.

We achieved further emissions reductions thanks to initiatives to reduce the carbon intensity of our energy sources. Compared to 2013, we have reduced our use of fossil-fuel oil and diesel by more than 30 percent, while our use of biofuels has more than doubled and now constitutes a slightly larger share of our energy use than fossil-fuel oil and diesel.

In several European countries we now purchase all of our electricity from renewable sources. In 2017, 165 GWh, or 10.6 percent of all electricity used by ABB, was purchased as certified "green" electricity, an increase of 2.8 percentage points from 2016.

More of our facilities are also installing on-site photovoltaic power plants to reduce their environmental impact and demonstrate our solar

Total greenhouse gas (GHG) emissions (Scope 1 and 2) and GHG intensity



capabilities. In 2017, ABB's Real Estate function expanded its energy efficiency program in the US, identifying over 400 technical measures it could apply in ABB's buildings. These measures have the potential to save $6.8 million annually with an average payback period of 4.7 years. In previous years, the program had already identified 700 technical measures it could apply in our buildings in Europe.

In 2017, more than 250 energy-saving projects were underway at ABB sites, with expected annual energy savings of 35 GWh. Many of these projects addressed the efficiency of compressed air systems and heating, ventilation and cooling processes, while others focused on investing in more efficient equipment, implementing or updating heat recuperation from machines and processes, and improving the energy efficiency of our buildings. The most common and cost-effective projects involved the implementation of energy-efficient lighting solutions at our sites.

In addition, all ABB sites are required to establish energy-saving programs and act to reduce GHG emissions. In 2017, we introduced a quarterly KPI at 300 of our largest manufacturing sites, accounting for 95 percent of ABB's energy usage, to track our progress.

Case study
ABB boosts renewables and power reliability at its own facilities
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RESOURCE EFFICIENCY

Making our operations smart and sustainable

One of ABB's top objectives is to reduce the environmental impact of its sites around the world

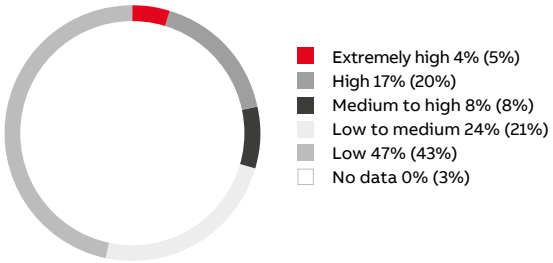
We work to optimize our use of resources, minimize waste from our operations, increase the share of waste that is reused or recycled, and ensure that the products we produce and the materials we use comply with our own and our stakeholders' standards.

In 2017, no changes were made to our 2020 measures and targets for resource efficiency. Our first target is to reduce absolute water withdrawals by 25 percent between 2013 and 2020 at facilities in watersheds with medium to extremely high baseline water stress. While most of our manufacturing processes do not consume significant amounts of water, ABB is committed to reducing its water impact where it matters most. We map our facilities using the World Business Council for Sustainable Development's Global Water Tool and classify them according to the level of "baseline water stress" of the watershed where they are located. Of the 561 ABB locations mapped in 2017, 81 face an extremely high level of water stress, 118 face a high level, and 89 face a medium to high level.

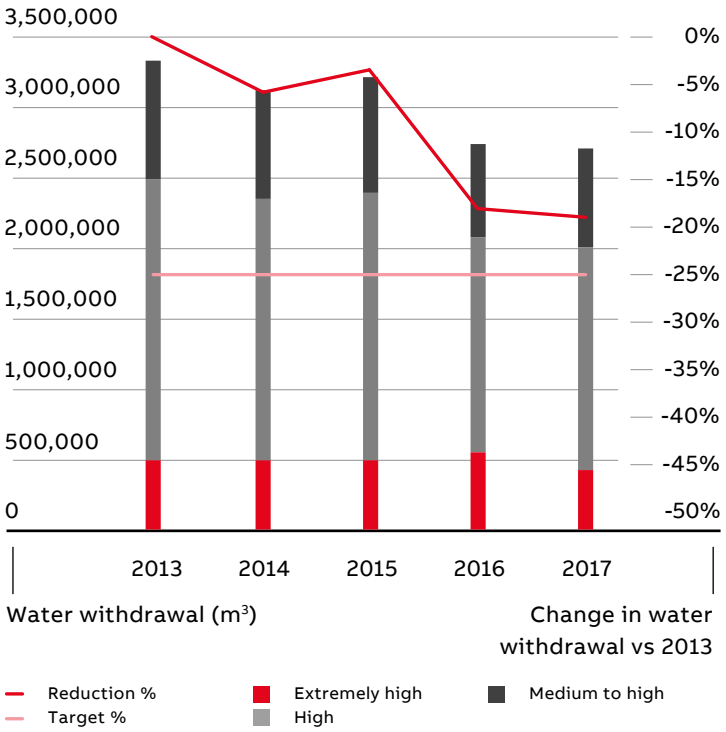
Over the past year, we performed well towards our 2020 water target. For all ABB sites in stressed watersheds, total water withdrawals in 2017 were 19 percent lower than the 2013 baseline. We achieved a 1.1 percent reduction in our withdrawals in stressed watersheds compared to 2016, even as our total water use increased by 2.0 percent.

The 35 water reduction projects we implemented across ABB contributed to these savings. For example, a facility run by our Power Grids division in Beijing – an area facing an extremely high level of water stress – cut water consumption by nearly 50 percent after deploying an automated water control and optimization system at its 26,000-square-meter campus.

Distribution of water withdrawal in 2017 (2013)



Water withdrawal in water-stressed areas 2013–17



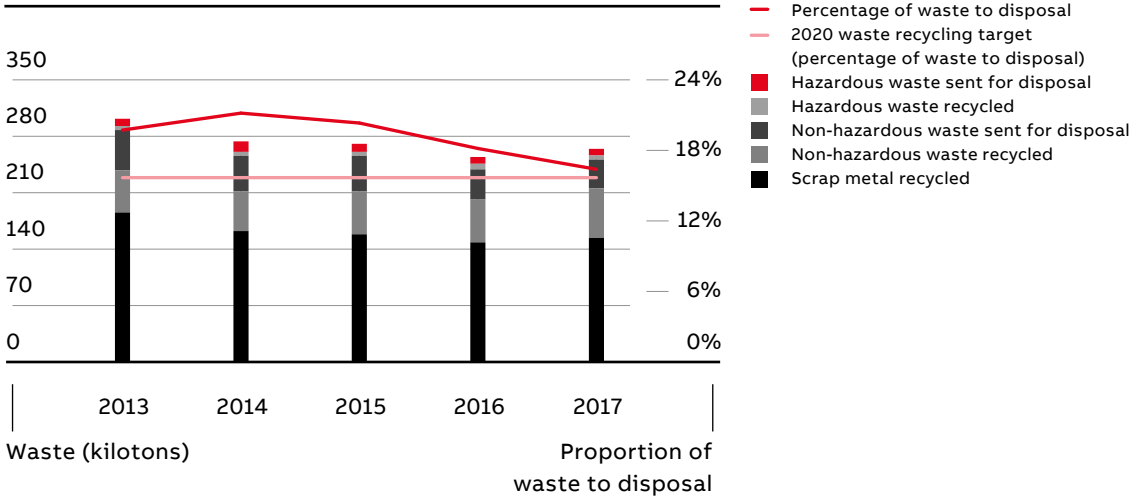
Our second target is to reduce the amount of waste sent to final disposal – both hazardous and non-hazardous – by 20 percent by 2020. This is measured as the proportion of total waste that is sent for final disposal and compared with a 2013 baseline.

In 2017, we reduced the proportion of waste sent to final disposal to 16.6 percent compared to 19.6 percent in 2013. In-house recycling and reuse, mainly of packaging materials and thermoplastics, reduced the amount of waste by 5,100 tons. Nearly 80 recycling or waste reduction projects were underway in ABB in 2017.

For example, this past year our composites factory in Piteå, Sweden, cut manufacturing scrap by 16 metric tons through process optimization, an action that will deliver $65,000 in savings per year. Our semiconductor factory in Prague, Czech Republic, also increased its income from the sale of scrap metal and other waste by $40,000 by using better sorting methods.

Our most significant new initiative in 2017 to support the achievement of our waste reduction target was the introduction of a quarterly KPI at 300 of our largest manufacturing sites to track progress on sorting and recycling of non-hazardous waste. These sites represent more than 95 percent of ABB's generation of non-hazardous waste. This year we also launched a global control standard on waste management that explicitly states sending waste to landfill should be avoided.

Waste and recycling



Case study
Collaborating with local farmers in Mysore, India
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RIGHT MATERIALS

Eliminating unsafe substances

ABB is phasing out hazardous substances from products and processes wherever feasible

To help us phase out hazardous substances, we have compiled the ABB List of Prohibited and Restricted Substances. The list, which is updated regularly in line with international regulations, applies to all our operations, including goods supplied to ABB, product development, production processes, products, packaging materials, service activities and construction sites.

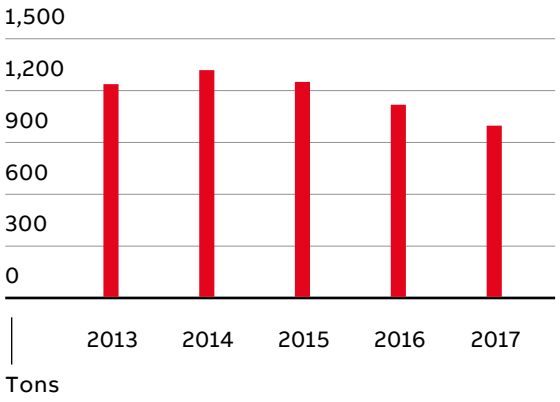
This list helps our facilities to comply with regulatory requirements and to ensure the protection of human health and the environment along the value chain. As regulatory compliance is also part of ABB's Global Terms and Conditions for suppliers and our Supplier Code of Conduct, we have developed a companion guide to the list to support suppliers' understanding of their obligations. These obligations include their ongoing partnership with us to identify and prevent "conflict minerals" and restricted substances from entering ABB's supply chain.

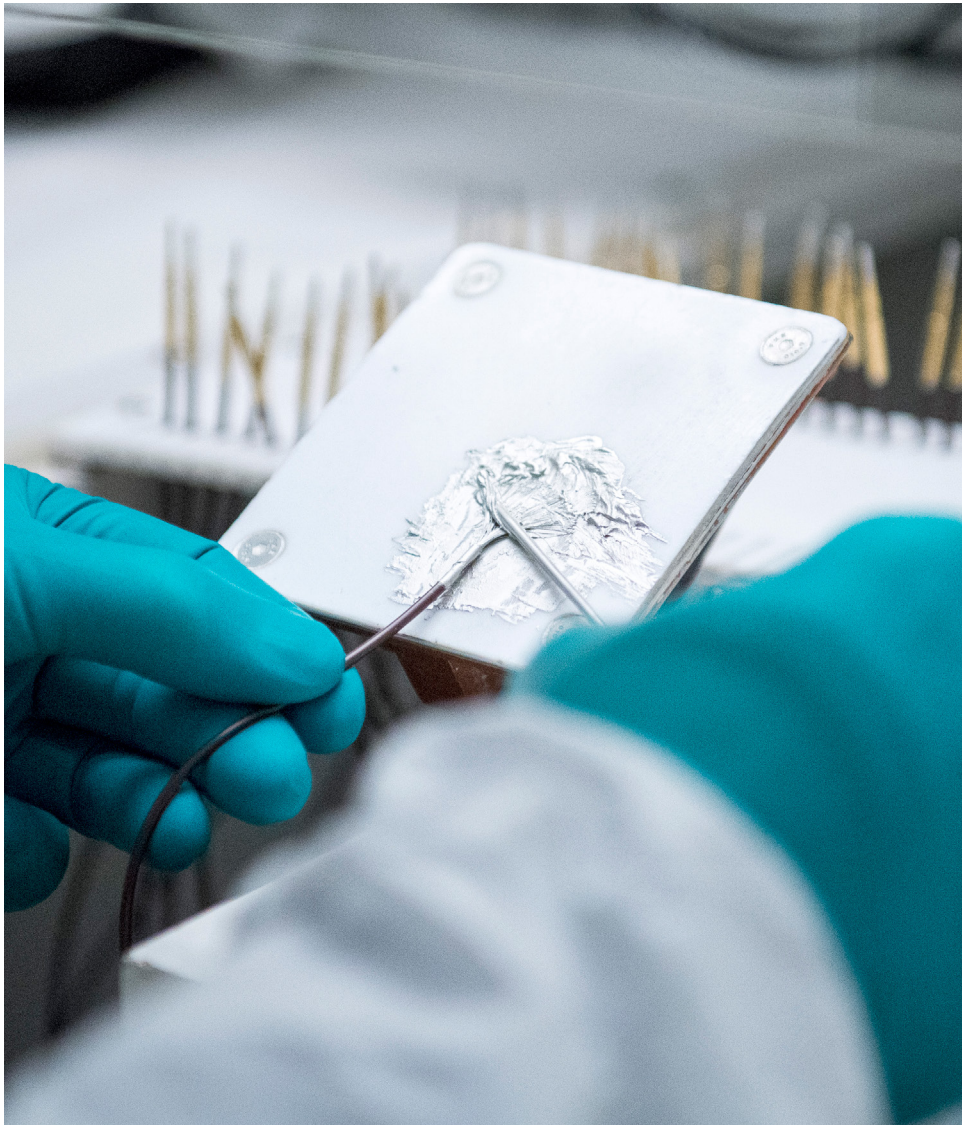
In 2017, we refined ABB's 2020 measures and targets for the materials we use. Going forward, our objective is to reduce our emissions of volatile organic compounds (VOCs) by 25 percent by 2020. This target further strengthens our efforts to reduce the use of substances that are harmful to human health and the environment.

We performed well towards our 2020 target over the past year, as our VOC emissions decreased by 11 percent compared to the year before. We achieved this result through measures such as substituting less harmful products for solvents, recycling solvents in used paint, switching to low-VOC paints, and installing technical equipment to reduce emissions.

In 2017, our most significant initiative was the establishment of a cross-functional material compliance team. Its mission is to facilitate a standardized and systematic approach to the increasingly complex material compliance regulations we face in our global markets, based on best practices. The team assessed current

Emissions of volatile organic compounds





efforts in the business units, communication with suppliers and customers, standards, guidelines, tools, trainings and internal expert support. The team also worked with ABB's divisions to develop and release new global standards and guidelines, together with new, globally available webinar training packages on the REACH regulation and the RoHS directive.

19%
decrease in VOC emissions since 2013

In 2017, 48 projects were underway to reduce and phase out hazardous substances and VOC emissions. ABB's network of environmental specialists collected and shared best practices from these projects to demonstrate how to phase out hazardous substances and the benefits of doing so. Due to the variety of products and manufacturing processes across our organization, hazardous substances are generally reduced on a site-by-site basis.

For example, ABB Ltd. in Stonehouse, Great Britain, phased out hexavalent chromium for the etching of plastic cuvettes, replacing it with acidified potassium permanganate. This change maintained quality levels while reducing the risk to human health and the environment. Similarly, at our traction transformer factory in Geneva, Switzerland, we phased out the hazardous substance m-tolylidene di-isocyanate from the product lines because of the dangers it poses to human health in the supply chain and the risk of future restrictions on its use.

Case study
Conflict minerals
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RESPONSIBLE SOURCING

Forging a sustainable supply chain

ABB works closely with its suppliers to ensure that its sustainability expectations, ambitions and targets are understood and met

At ABB, we have ingrained our sustainability policies into all relevant procedures. As such, we pay close attention to the sustainability performance of our suppliers. ABB's mandatory Supplier Code of Conduct (SCoC), which is published in 16 different languages, communicates our expectations, ambitions and performance targets to existing and potential business partners.

All new suppliers to ABB are required to complete our supplier qualification process, in which we assess the sustainability performance of potential business partners at the initial selection stage, along with other business parameters. To become qualified to do business with ABB, new suppliers must certify their compliance with our SCoC. This aspect of our routine supplier evaluation process reiterates our commitment to responsible sourcing.

We have also implemented a rigorous Supplier Sustainability Development Program (SSDP) to proactively identify and rectify sustainability risks with high-risk suppliers. This targeted intervention program features training and on-site assessments to identify areas for improvement and ensure continuous monitoring. The SSDP assesses the sustainability performance of high-risk suppliers on 42 parameters linked to our SCoC. These parameters cover general management, working conditions, health, safety and environment and associated key local regulatory requirements. In addition, we develop special training to strengthen our suppliers' knowledge of local regulatory requirements and ABB's parameters.

Every year ABB trains, coaches and assesses hundreds of suppliers on sustainability topics. As this is a continuous process, old risks are closed and new ones identified each year. The time required to close these risks ranges from eight months to over a year for chronic or complex issues, which may require a collaborative effort to resolve. Since 2015, we have identified an average of 788 new risks each year. Due to the ongoing identification of new risks and the time required to mitigate them, the closure rate of identified risks can never be 100 percent, despite our best efforts. Going forward, our measure and target for 2020 is to close 65 percent or more of identified risks from supplier assessments. This target is based on a review of our performance over the past few years.

We exceeded our measure and target for 2020, closing 72 percent of identified risks by the end of 2017. Thanks to our strong focus on supplier development, as opposed to simply conducting audits, we were able to engage our suppliers as partners. This approach allowed us to arrive at solutions that will deliver tangible sustainability improvements.

SSDP top 10 global non-compliance issues
Critical and serious issues

1. Unsafe working practices
2. No first aid or fire-fighting equipment
3. Improper waste management
4. Environmental non-compliance (statutory)
5. Excessive working hours
6. No OHS risk assessment
7. No environmental risk assessment
8. No equipment testing
9. No monitoring of compliance
10. No environmental licenses

In 2017, we expanded the SSDP's footprint to three more countries: Bulgaria, Saudi Arabia and the United Arab Emirates. We assessed 243 suppliers, identifying 833 risks and mitigating 702 of them. In other activities to support responsible sourcing, we trained 533 ABB employees and 327 suppliers during the year.

After analyzing the data collected during our supplier assessments, the most frequent critical and serious issues observed were a lack of understanding of the environmental and occupational health and safety (OHS) risk assessments and a failure to comprehend statutory requirements and legal frameworks.

To address this, we continued to raise awareness through initiatives such as our specially designed OHS workshops. We also designed and implemented a special workshop in India on statutory and legal frameworks. In 2018, we will conduct comparable workshops in other countries.

We also work with suppliers to seek solutions to chronic problems that are embedded in the local socioeconomic fabric. By supporting them with operational data analysis and visits to their factories to identify root causes and potential areas for intervention, we have been able to arrive at mutually satisfactory solutions.

Case study
Suyog Electrical
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