



# Sustainability Report 2023





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# 01 Sustainability at ABB

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# CEO letter

**Dear Stakeholders,**

As a technology leader in electrification and automation, in 2023 ABB continued to play a key role in accelerating the energy transition for a net-zero future.

Our solutions help to optimize, electrify and decarbonize industry, buildings, power and transport – sectors that together account for the lion's share of global energy-related carbon emissions. By doing this, we made the ways we move, produce, work and live more sustainable.

Over the past year, ABB continued to make good progress towards its sustainability targets. For instance, we cut emissions in our own operations by an additional 32 percent, putting us well on track to achieve our 2030 target of reducing emissions by 80 percent compared with a 2019 baseline.

These improvements are the result of an organizational transformation that has empowered our businesses with full ownership and accountability for their operations and performance, as well as a deeper cultural change that has united ABB around our common purpose of enabling a more sustainable and resource-efficient future.

ABB's 2023 Sustainability Report touches on many of the concrete ways in which we are helping our customers improve their energy efficiency, drive electrification or integrate renewables into the power grid. The report also explains how we produce and distribute these technologies and support the people and communities that make our work possible. We strive to make every aspect of our operations as sustainable as possible.

In 2023, we strengthened and accelerated our Sustainability Agenda. We updated our ambitions and targets in line with recognized international standards and frameworks, we carried out a double materiality assessment, and we further embedded sustainability across our businesses.

ABB's Sustainability Agenda is structured around three pillars: enabling a low-carbon society, preserving resources and promoting social progress for a net-zero future. All three pillars support the United Nations' Sustainable Development Goals (SDGs) and in particular SDG 7 (affordable and clean energy), SDG 8 (decent work and economic growth), SDG 9 (industry, innovation and infrastructure) and SDG 13 (climate action).

To enable a low-carbon society, we announced new net-zero-aligned targets for 2030 and 2050 at our Capital Markets Day on November 30, 2023. These targets cover our scope 1 and 2 emissions, which we are aiming to reduce by 80 percent by 2030, without carbon offsets, as well as our scope 3 emissions, covering the rest of our value chain, which we aim to cut by 25 percent by 2030. By 2050, our goal is to have reached net-zero in our own operations and to have cut our scope 3 emissions by 90 percent.

These targets are aligned with the Science Based Targets initiative (SBTi) Net-Zero Standard. We submitted them to the SBTi in 2023 for validation in 2024.

Using the latest guidance published by the World Business Council for Sustainable Development (WBCSD), we have strengthened the way we track and quantify our customers' avoided emissions. Under this new methodology, we aim to help our





customers avoid 600 megatons of greenhouse gas (GHG) emissions through the products we sell from 2022 to 2030.

To preserve resources, we have initiated our Circularity Approach, with the goal of having 80 percent of ABB's products and solutions meet circularity requirements by 2030. This includes eliminating waste to landfill from our operations and helping our customers meet their own circularity commitments by offering retrofit, take-back and recycling services. In 2023, we increased the number of life cycle assessments (LCAs) for our products and solutions to promote eco-design principles and provide transparency to our customers.

To promote social progress, we strengthened our human rights due diligence along the value chain in line with the United Nations' Guiding Principles on Business and Human Rights. This report describes many other ABB initiatives aimed at creating safe, fair and inclusive working environments and providing impactful support for community-building initiatives. In this area, we have continued to place a special emphasis on education and upskilling programs in the STEM disciplines, as they will be key to making a net-zero future a reality.

On the topic of safety, we further reduced our lost-time injury frequency rate (LTIFR) to industry-leading levels. Despite this achievement and our concerted efforts, I am saddened to note that there was one fatal incident in 2023 involving one of our contractors, working on a project in Algeria. An investigation is underway. Our thoughts go out to the family of the deceased. We are continuously reviewing and updating our safety procedures to try to prevent such incidents.

All three pillars of our Sustainability Agenda are underpinned by our commitment to embedding a culture of integrity and transparency across our value chain. In 2023, following the release of our updated ABB Code of Conduct, we updated our Human Rights Policy and Supplier Code of Conduct to reflect our Sustainability Agenda. Our Supplier Code of Conduct forms an important part of our procurement terms and conditions.

ABB has considerable cause for pride as we seek to fulfill our purpose of enabling a more sustainable and resource-efficient future. I want to thank our customers, employees, investors, partners and all other stakeholders for your continuing collaboration, support and trust.

Together, we are leading the way to a sustainable future.

**Björn Rosengren**  
CEO, ABB Ltd

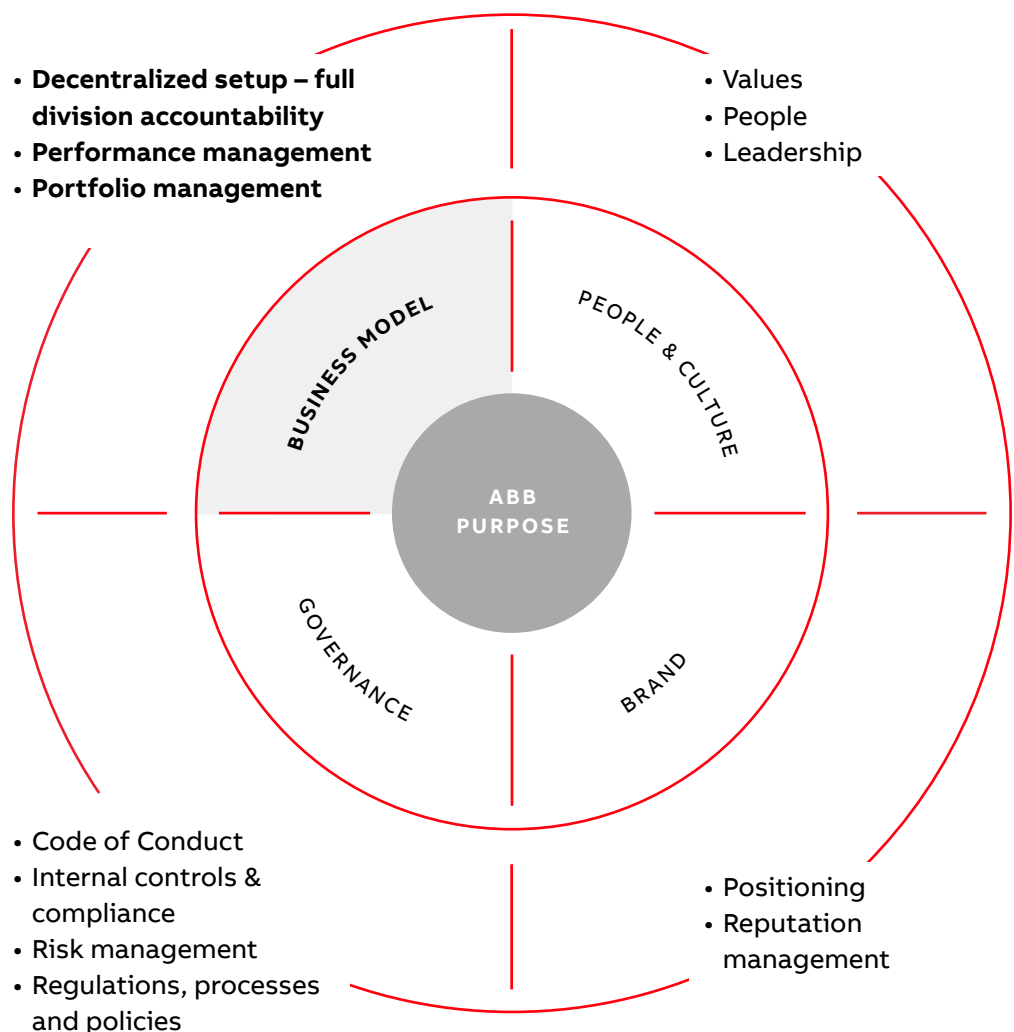


# The ABB Way

The ABB Way, our operating model, enables us to create superior value for all our stakeholders. It defines how our business areas, divisions and lean corporate center approach holistic value creation in our decentralized set-up. By doing so, it serves as the glue that holds our Group together. Core to the ABB Way is our purpose – to enable a more sustainable and resource-efficient future with our technology leadership in electrification and automation.

The ABB Way outlines our business model as well as our approach to developing our people and culture, maintaining good governance, and nurturing our brand. While our Sustainability Report focuses on the business model, a comprehensive view of the other elements of the ABB Way and our value creation model can be found in our Integrated Report.

## THE ABB WAY



## Business model

ABB's business model determines how we govern our portfolio of 19 divisions, manage performance, including delivering on our Sustainability Agenda, and drive value creation for our stakeholders by building on our core competencies.

### **Decentralized set-up – full division accountability**

While the ABB Way provides standardized policies, processes and systems, it also empowers our divisions to take full ownership of and accountability for their respective strategies, performance and resources. In practice, this means that divisions follow the Group's strategic direction and pursue opportunities to collaborate, yet also define their own course of action to deliver on, e.g., Group financial or sustainability targets and allocate resources accordingly.

### **Performance management**

Building on our mindset of continuous improvement, ABB translates its strategic priorities – including financial performance and progress on sustainability – into short- and long-term targets, which are supported by appropriate incentives. A scorecard system and holistic set of key performance indicators (KPIs) enable us to plan, measure, monitor and review progress against these targets. Incentives enable us to maintain a strong link between strategy and compensation. This linkage includes our commitment to sustainability, which is embedded in both the Long-Term Incentive Plan (incorporating one sustainability-related measure) and the Annual Incentive Plan (incorporating at least two sustainability-related goals in the individual component for Executive Committee members).

### **Portfolio management**

ABB actively and systematically manages its business portfolio. Value creation is focused on both organic and inorganic investments that increase ABB's exposure to megatrends such as sustainability and digitalization, fill technology gaps, complement or expand our offering in high-growth segments, provide access to new geographies, and lead to economies of scale through consolidation.

Capital allocation for investments in organic and inorganic growth is based on our divisions' strategic mandates – stability, profitability or growth – and on our portfolio assessment criteria. Divisions with a growth mandate are expected to deliver organic growth and to actively pursue value-creating, bolt-on acquisitions; targets must fit well with ABB's purpose to enable a sustainable and resource-efficient future and to operate in attractive markets. To support the achievement of our revised financial and sustainability targets, we further developed our portfolio assessment approach and also fully embedded sustainability into our methodology through a distinct sustainability lens. Similarly, existing businesses or parts of divisions that may structurally no longer meet our assessment criteria – i.e., assets for which ABB is no longer the best owner or can no longer deliver superior value creation – become exit candidates.



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# Sustainability Agenda

ABB has enabled energy efficiency and electrification on multiple fronts for 140 years. Today, we are focused on leveraging our leading technologies in electrification, automation and digitalization to drive the ongoing energy transition. By helping our customers in industry, buildings, power and transport – sectors that account for the majority of the world’s energy-related carbon emissions – to electrify, optimize and decarbonize, we enable them to remain competitive while reducing their carbon footprints. Delivering on our purpose, ABB’s solutions make the ways we move, produce, work and live more sustainable.

Based on our purpose to enable a more sustainable and resource-efficient future, we aim to create holistic value for stakeholders across ABB’s entire value chain. Our Sustainability Agenda reflects the value we create by enabling a low-carbon society, preserving resources and promoting social progress. It builds on our ABB Way operating model and is underpinned by ABB’s culture of integrity and transparency, extending across our value chain. ABB also creates value in ways beyond the Sustainability Agenda – through our leading financial performance, world-class technology and culture of integrity and transparency. While the ABB Sustainability Report focuses on our Sustainability Agenda, our Integrated Report provides a holistic perspective on our Group’s entire value creation.

To enable a low-carbon society, we are raising our ambitions regarding our existing science-based targets by setting net-zero targets aligned with the SBTi Net-Zero Standard. In 2023, we submitted our updated scope 1, 2 and 3 targets for 2030 and 2050 to the Science Based Targets initiative for validation. We are cutting our own GHG emissions, empowering our customers to avoid emissions and deploy more renewables, and working with our suppliers and partners to expand their efforts.

To preserve resources, we consider the full life cycle of our products and apply our Circularity Approach, steadily cutting waste and water use while broadening our capabilities for reuse and recycling. Our efforts are in line with the latest international standards.

To promote social progress, we seek to help workers and their communities and societies to develop and reach their full potential. To achieve this, we aim to cause zero harm to our people and contractors, increase the proportion of women in senior management roles, achieve a top-tier employee engagement score, respect and promote human rights along our value chain and expand our programs for community engagement.

Through our governance approach as defined by the ABB Way, our Sustainability Agenda is fully embedded across our businesses. Our strong business model, with its decentralized set-up and sharp focus on performance management, ensures that our business areas and divisions are fully accountable for their sustainability performance. In 2023, we continued to make progress toward our ambitious sustainability targets.

Targets	Baseline (baseline year) <sup>1</sup>	2023 status
<b>LOW-CARBON SOCIETY</b>		
Reduce own scope 1 and 2 CO <sub>2</sub> e emissions by at least 80% by 2030 and by 100% by 2050	636 kilotons CO <sub>2</sub> e (adjusted for portfolio changes) 2019	151 kilotons CO <sub>2</sub> e
Reduce scope 3 CO <sub>2</sub> e emissions by 25% by 2030 and by 90% by 2050	76,834 <sup>2</sup> kilotons CO <sub>2</sub> e (2022) / 392,188 <sup>3</sup> kilotons CO <sub>2</sub> e (2022)	76,665 <sup>2</sup> kilotons CO <sub>2</sub> e / 436,346 <sup>3</sup> kilotons CO <sub>2</sub> e
Ambition to avoid 600 megatons CO <sub>2</sub> e emissions throughout lifetime of products sold from 2022 to 2030 <sup>4</sup>	65 megatons CO <sub>2</sub> e (2022)	74 megatons CO <sub>2</sub> e
<b>PRESERVING RESOURCES</b>		
Cover at least 80% of ABB's portfolio of products and solutions with our Circularity Approach by 2030 <sup>5</sup>	n.a.	31% <sup>6</sup> (share of ABB's products and solutions assessed)
Send zero waste to landfill while reducing waste generation by 2030	16.8 kilotons (2019), equivalent to 8.8% of total waste (adjusted for portfolio changes)	10.1 kilotons, equivalent to 6.3% of total waste
<b>SOCIAL PROGRESS</b>		
Zero harm to our people and contractors – we aim for a gradual reduction in lost time from incidents	0.24 (2019) <sup>7</sup>	0.13
Increase proportion of women in senior management <sup>8</sup> roles to 25% by 2030	11.7% (2019)	21.0%
Achieve a top-tier employee engagement score	71/100 (2019)	77/100
Expand programs for community engagement	n.a.	As part of the improvement process started in 2022, in 2023 we assessed our community engagement positioning and revised and expanded the scope of action, now focused on education, emergency and disaster relief, community empowerment, and environment and conservation.
<b>INTEGRITY &amp; TRANSPARENCY</b>		
Global framework for assessing and mitigating third-party integrity risks through risk-based due diligence and life cycle monitoring	n.a.	This target measures the implementation of a global framework for assessing third-party integrity risks. It is an ongoing and critical organization-wide, integrity-based enhancement, which strengthens how we onboard and manage the life cycle of our relationships with suppliers, sales channels and customers.  Framework established and operational. Integrity due diligence and risk management enhancements for suppliers (buy-side) and sales channels (sell-side) launched globally.

<sup>1</sup> Where a baseline applies.

<sup>2</sup> Representative scenario: Energy loss used as basis for calculations; see explanation in the "Customer emissions" chapter of this report.

<sup>3</sup> Strict scenario: Energy input used as basis for calculations; see explanation in the "Customer emissions" chapter of this report.

<sup>4</sup> This ambition is not part of the committed targets.

<sup>5</sup> Based on revenues from hardware-based products and solutions, where granularity of financial systems allows. Service revenues are excluded.

<sup>6</sup> The circularity score of the assessed products and solutions is to be calculated once a representative share of the portfolio has been assessed.

<sup>7</sup> 2019 baseline excludes the Power Grids business and the Turbocharging division.

<sup>8</sup> At ABB, senior managers are defined as employees in Hay grade 1-7, including Division Presidents.



Targets	Baseline (baseline year) <sup>1</sup>	2023 status
Global Integrity Program underpinned by accountability for integrity and an adaptive risk management strategy gained from insights through targeted learnings, transparent reporting and monitoring	n.a.	<p>This target measures the implementation and effectiveness of our Global Integrity Program through how we drive individual accountability for integrity and adapt our risk management strategy to real-time data insights gained from integrity-based learnings, reporting and monitoring.</p> <p>1. <b>Trust KPI</b> – the rate of severity level 1 and 2 investigations where the reporter disclosed their identity:</p> <ul style="list-style-type: none"> <li>• Year 1 (January 1, 2021, to December 31, 2021): 57% of reporters.</li> <li>• Year 1 and 2 (January 1, 2021, to December 31, 2022): 60% of reporters.</li> <li>• Year 1, 2 and 3 (January 1, 2021, to December 31, 2023): 60% of reporters.</li> </ul> <p>2. <b>Engagement KPI</b> – the volume of unique visitors to the Integrity Awareness Portal (IAP) for integrity learnings:</p> <ul style="list-style-type: none"> <li>• Year 1 (January 1, 2021, to December 31, 2021): 25% of employees with online access.</li> <li>• Year 1 and 2 (January 1, 2021, to December 31, 2022): 69% of employees with online access.</li> <li>• Year 1, 2 and 3 (January 1, 2021, to December 31, 2023): 80% of employees with online access.</li> </ul>
At least 80% of supply spending in focus countries <sup>2</sup> covered by Sustainable Supply Base Management (SSBM) by 2030	n.a.	Using a risk-based approach, a mid-term 2025 target has been set, focusing on high-risk suppliers in focus countries. <sup>2</sup>
At least 80% of spending on high-risk suppliers in focus countries <sup>2</sup> covered by SSBM by 2025		In 2023, we reached 42% of spending on high-risk suppliers in focus countries <sup>2</sup> covered by SSBM.
Linking sustainability targets to executives' variable pay	<p>Under the Annual Incentive Plan (AIP), a safety goal was included within the individual measure for some member of ABB's Executive Committee (EC). The individual measure had a weighting of 20 percent of the executive's target AIP (2019).</p> <p>Under the Long-Term Incentive Plan (LTIP), two performance measures with equal weighting of 50 percent were considered, namely average earnings per share and relative total shareholder return. The LTIP was awarded to around 100 executives, including EC members and division presidents. Vesting under the LTIP was subject to the achievement of the plan specific targets over a period of three years (2019).</p>	<p>Under the AIP, at least two sustainability-related performance goals are included within the individual measure for each member of ABB's EC. The individual measure has a weighting of 20 percent of the executive's target AIP.</p> <p>One of the three performance measures under ABB's LTIP is based on achievement of a corporate sustainability target and carries a weighting of 20 percent. The LTIP is awarded to around 100 executives, including EC members and division presidents. Vesting under the LTIP is subject to the achievement of the plan specific targets over a period of three years.</p>

<sup>1</sup> Where a baseline applies.

<sup>2</sup> Current focus countries are Argentina, Brazil, Bulgaria, China, Colombia, India, Indonesia, Malaysia, Mexico, Peru, Poland, Saudi Arabia, South Africa, Thailand, Türkiye and Vietnam.







# Sustainability governance

In line with the ABB Way, responsibility for sustainability is clearly defined and covers all levels of the organization:



ABB's Board of Directors reviews and approves the Sustainability Agenda and related targets. In 2023, topics related to the Sustainability Agenda were discussed in every Board meeting. Board committees also have specific roles in relation to sustainability: The Governance and Nomination Committee (GNC) is responsible for overseeing ABB's Sustainability Agenda (including corporate social responsibility, health, safety and environment). It reviews and proposes to the Board the company's Sustainability Agenda and its targets, monitors target progress and achievements, and reports to the Board at least once per year. The Compensation Committee ensures that ABB's executive compensation policies are appropriately aligned with its Sustainability Agenda.

The ABB Group Executive Committee validates the Sustainability Agenda and its implementation. It is responsible for reviewing sustainability targets in line with our performance management approach and our business model, as well as for ensuring that a sustainability culture is embedded in our business decision-making. In every Executive Committee meeting held in 2023, topics related to the Sustainability Agenda were discussed. The Chief Communications and Sustainability Officer, who is a member of the Group Executive Committee, holds functional responsibility for



sustainability and reports together with the Group Head of Sustainability to the GNC on topics and progress related to the Sustainability Agenda.

The Sustainability Council is the operational body that oversees implementation of the Sustainability Agenda, reviews developments and monitors progress toward targets. As of 2023 and in line with the ABB Way, all business areas are represented in the Sustainability Council by their heads of strategy as well as their respective sustainability leads. This has further strengthened the role of the Sustainability Council.

The Group sustainability team shapes ABB's Sustainability Agenda based on internal and external stakeholder input, impact assessments and evolving regulatory requirements, and drives sustainability topics on the Group level. To strengthen the quality of our sustainability data and ensure an accurate assessment of our sustainability performance, responsibility for ABB's sustainability reporting was moved to the Finance function in 2023.

In 2023, the Sustainability Council defined and clarified the role of topic-specific workstreams. These workstreams establish targets and roadmaps across business areas and determine the governance for their respective sustainability topics. Additionally, they monitor trends and share best practices across business areas. The workstreams include subject-matter experts from our business areas and divisions, as well as members of the Group sustainability team. The workstreams regularly report to the Sustainability Council on their progress and receive support from the Council where needed.

In line with the ABB Way and our decentralized operating model, our four business areas and their divisions are ultimately responsible for putting action plans in place and ensuring that appropriate resources are available to implement these plans and deliver on our targets. To strengthen division-level accountability in line with our decentralized operating model, each division appointed a Division Carbon Accounting Lead in 2023.



# Materiality

In 2023, ABB conducted a double materiality assessment. This type of assessment has proven to be particularly relevant for companies and organizations that are committed to integrating sustainability considerations into their business strategies and reporting practices. The term “double materiality” refers to the two-way relationship that exists between a company and the economy, environment and society in which it operates. In other words, while the business activities of a company can have a variety of impacts on the economy, environment and society including people (impact materiality), changes that occur within the economy, environment and society can also impact the activities of the company (financial materiality). ABB’s 2023 double materiality assessment replaces our prior materiality assessment, which was developed in 2020, to provide a more complete picture of this two-way relationship.

The assessment was guided by the following regulatory requirements and reporting standards: the provisions of the amended Swiss Code of Obligations related to transparency on non-financial matters (Art. 964b CO), the European Sustainability Reporting Standards (ESRS), Global Reporting Initiative (GRI), Integrated Reporting Framework (IR), IFRS Sustainability Disclosure Standards, SASB Standards and recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

Over the course of 2023, ABB took a systematic approach to implementing its double materiality assessment. As we were seeking stakeholder feedback to define our material topics, we reviewed and updated the overview of the company’s stakeholder groups. While no major changes were made to the overall group categories, the name of the “external partners” group was changed to “collaborative partnerships” to emphasize our collaborations with other companies and research and academic institutions on a wide range of societal, environmental and technological activities and topics. The updated six stakeholder groups are: collaborative partnerships, customers, employees, governments and civil society, investment community and suppliers. A clear definition was formulated and finalized for each stakeholder group. For more information, please refer to the “Stakeholder engagement” chapter in this report.

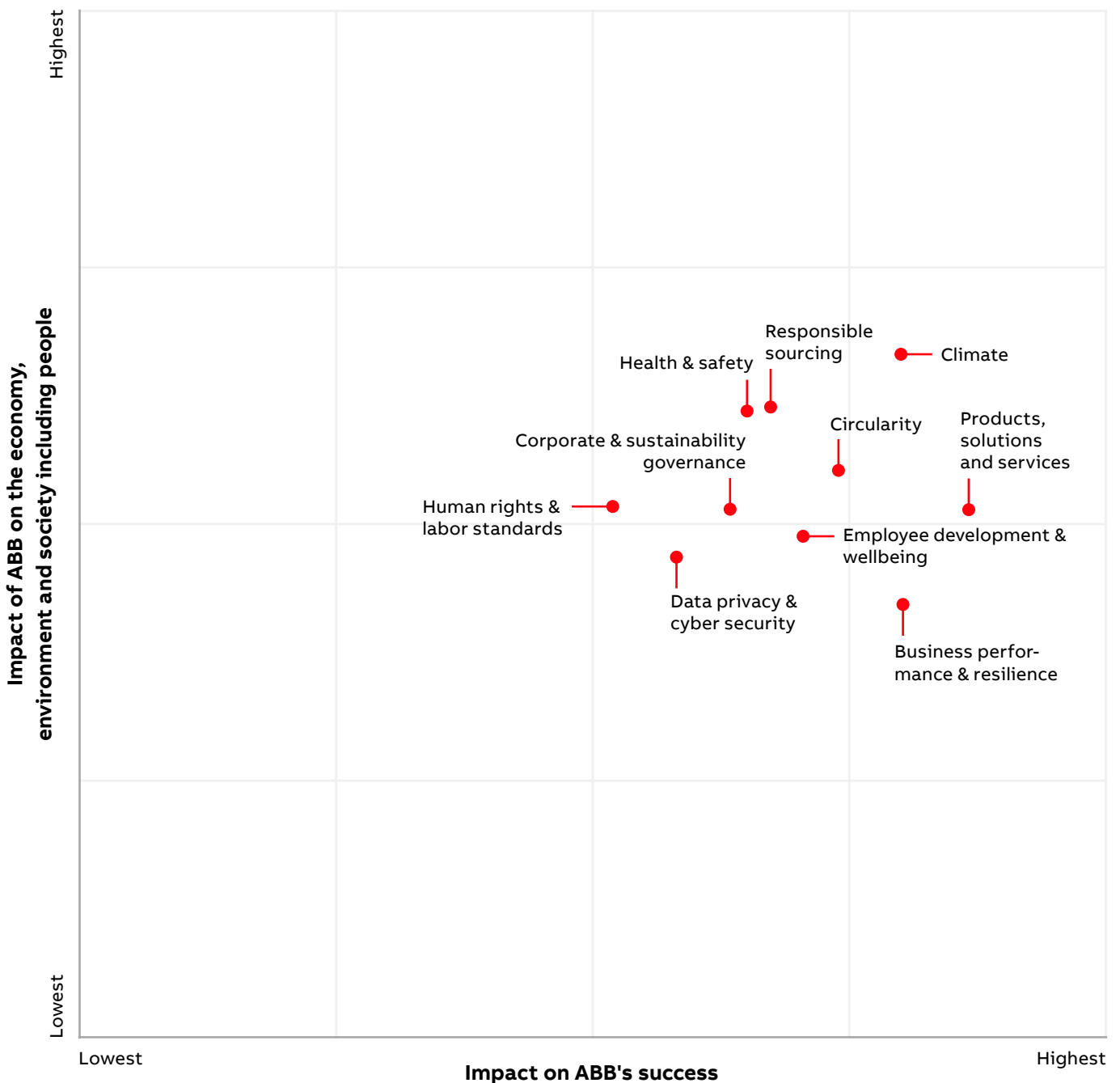
ABB conducted extensive research to consider evolving regulatory and reporting requirements, industry- and sector-specific topics, and global trends. Positive and negative impacts were derived from desk research, ABB documentation and industry knowledge. On this basis, we identified and categorized 24 potentially material topics for ABB. The list was then validated through the outcome of the internal stakeholder surveys performed by ABB. ABB’s corporate functions and four business areas assessed the topics and impacts from multiple perspectives through an online survey. In total, 59 representatives participated in the survey. In preparation for the external stakeholder survey, and in the interest of greater clarity and understanding, ABB elected to simplify the list of topics by clustering them into broader topics. Definitions for these topics were then developed in close consultation with ABB’s internal subject-matter experts and with detailed cross-referencing to the results from the internal survey. The topic descriptions can be found in the Appendix of this report.

Next, ABB invited 1,447 external stakeholders – drawn from among our collaborative partnerships, customers, employees, governments and civil society, investment community and suppliers – to participate in an online survey addressing ABB’s impacts related to the proposed topics. Of these, 308 stakeholders submitted a complete response. The work of engaging with ABB’s key external stakeholders represents an essential aspect of the double materiality assessment process, as these parties are

## ABB’s approach to double materiality

well positioned to identify and evaluate many of ABB's material impacts. The results of our external stakeholder survey were reviewed during a validation workshop involving the strategy and sustainability heads from each business area and relevant corporate functions.

Key impacts, risks and opportunities related to the proposed topics were used to identify material topics. The risks related to the material topics were identified based on the results of our Enterprise Risk Management (ERM) process. In total, we identified 10 topics that we consider material because they scored particularly highly in terms of ABB's impact on the economy, environment and society including people, and in terms of the impact of these topics on ABB's success. The 10 material topics were then mapped on to a matrix; the two axes of which were "Impact of ABB on the economy, environment and society including people" and "Impact on ABB's success."





The 2023 ABB double materiality matrix was reviewed and approved by the Executive Committee and the Governance and Nomination Committee of ABB's Board of Directors.

In our pursuit of a sustainable future, it is crucial to acknowledge that sustainability extends beyond the material considerations of a single company. The double materiality assessment is vital in identifying sustainability topics on which ABB has high impacts and vice versa. Equally, it is important to recognize that some of the topics that scored lower and therefore have been deemed non-material, such as water and waste management, biodiversity and land use, partnerships and collaboration, and diversity and inclusion are relevant for ABB's and the world's collective future. Embracing these topics is necessary to ensure a more comprehensive and forward-thinking approach to responsible business practices.

Looking ahead, we will continue to engage with our stakeholders to track the ongoing evolution of material topics in response to global risks and opportunities, new regulations and emerging trends, among other factors.



# Contributions to the United Nations' Sustainable Development Goals

Adopted by the member states of the United Nations in 2015, the 17 Sustainable Development Goals (SDGs) and their 169 sub-targets offer a blueprint for achieving peace and prosperity by 2030. Business has a vital role to play in driving progress if the SDGs and their sub-targets are to be achieved by the end of this decade.

ABB has always been a strong advocate for the SDGs. Following our double materiality assessment in 2023, we decided to review our impacts on the SDGs. By canvassing a wide range of internal and external stakeholders for their perspectives on ABB's impacts on the economy, environment and society including people, the double materiality assessment provided us with accurate data for our SDG mapping. We mapped the topics that we identified in our double materiality assessment against the 169 sub-targets of the SDGs. This process allowed us to identify four SDGs on which we have the greatest impact. They are as follows:

<p><b>7</b> AFFORDABLE AND CLEAN ENERGY</p>	<p><b>8</b> DECENT WORK AND ECONOMIC GROWTH</p>	<p><b>9</b> INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	<p><b>13</b> CLIMATE ACTION</p>
<p>Ensure access to affordable, reliable, sustainable and modern energy for all.</p>	<p>Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all.</p>	<p>Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation.</p>	<p>Take urgent action to combat climate change and its impacts.</p>

ABB enables access to affordable and sustainable energy through our portfolio of electrification, automation and energy-efficient solutions.

ABB contributes to decent work and economic growth by providing safe and fair employment, paying taxes and supporting local communities.

ABB's innovative technologies actively contribute to sustainable industrialization and give us, our business partners and our customers the ability to move, work and live more sustainably.

By cutting our own GHG emissions, empowering customers to avoid emissions and integrate renewables, and working with suppliers and partners to reduce their carbon footprints, ABB is enabling decarbonization and climate action.

The selection of these four SDGs is fully aligned with ABB's purpose of enabling a more sustainable and resource-efficient future with our technology leadership in electrification and automation. This alignment allows us to focus our efforts on those areas where we can generate the greatest impact. While these are the SDGs on which ABB has the most influence, we also recognize the importance of all other SDGs and endeavor to contribute to their achievement whenever and wherever possible.



ABB supports the Sustainable Development Goals

# Environmental, social and governance ratings

An environmental, social and governance (ESG) rating is a measure of a company’s exposure to long-term environmental, social and governance risks. Because these risks have financial implications, ESG ratings are used by investors to form a broader understanding of a company’s long-term potential.

At the end of 2021, we identified the most relevant ESG ratings for ABB and its stakeholders on the basis of an internal review. Drawing on the results from the review, the Executive Committee decided in 2022 to reduce the number of ESG ratings in which we participate. We reviewed the six rating providers again in 2023 and confirmed that they remain the most relevant to ABB.

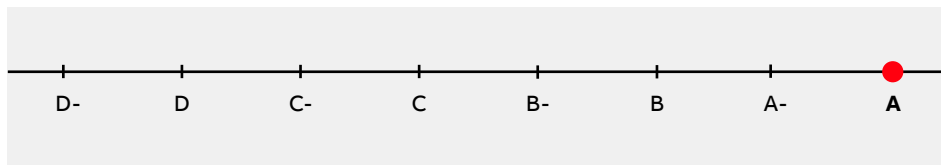
We were pleased to note that our overall ESG ratings improved in 2023 over 2022. We attribute this improvement to our robust governance structure and our progress toward our 2030 sustainability targets, as well as to the work we did to refine these targets further.

## THE ESG RATINGS WE PARTICIPATE IN ARE THE FOLLOWING:

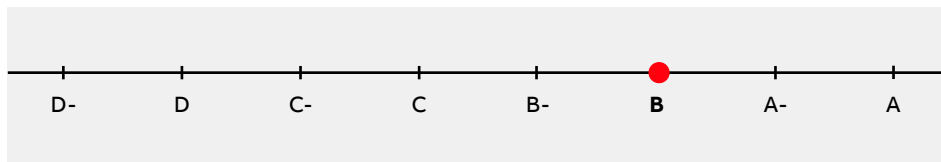
**Score**

**Rating**

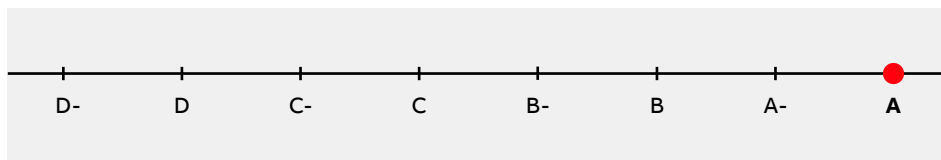
**CDP Climate**



**CDP Water**



**CDP Supplier Engagement**

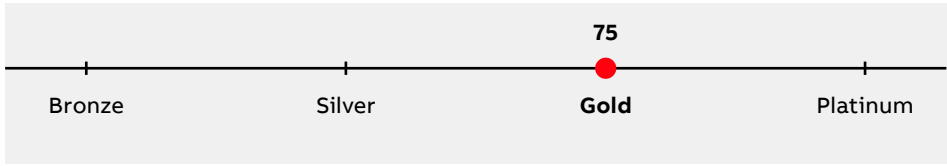


The 2023 CDP Supplier Engagement score will be available in March 2024.

**Score**

**Rating**

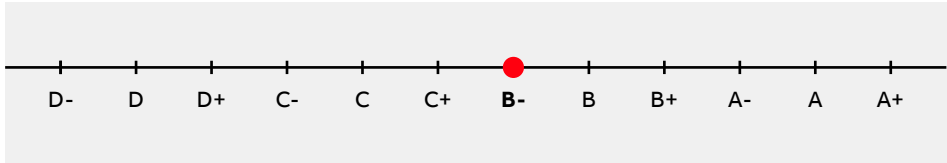
**EcoVadis**



EcoVadis Gold medal, issued on February 17, 2023: 75/100



**ISS ESG**



ISS ESG Corporate Rating, received on July 17, 2023



**MSCI**



In 2023, July 21, ABB received a rating of AAA (on a scale of AAA-CCC) in the MSCI ESG Ratings assessment.<sup>1</sup>



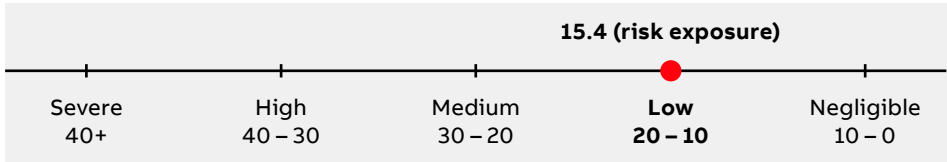
**S&P Global CSA ESG Score**



Sustainability Yearbook Member 2024, within the top 15% of the industry, based on S&P Global Corporate Sustainability Assessment (CSA) Score 2023.



**Sustainalytics**



Sustainalytics ESG Risk Rating, October 12, 2023: 15.4<sup>2</sup>



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# 02 Low-carbon society



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# We enable a low-carbon society

ABB is driving the shift towards a low-carbon economy with its innovative technologies. Our expertise in electrification and automation enables greater energy efficiency and the integration of renewables into the energy mix. We work closely with our customers and suppliers to help them save energy and reduce emissions across their value chains. Our commitment to supporting energy security and the transition to a low-carbon society is also demonstrated by the work we are doing to increase energy efficiency and reduce emissions in our own operations.

This area of endeavor is critical to ABB’s approach to creating value for all our stakeholders. Moreover, our 2023 double materiality assessment identified climate as the topic that is the most material to our business. Under ABB’s Sustainability Agenda, we have set targets that are aligned with the SBTi Net-Zero Standard for both our operations and value chain emissions, including customer and supplier emissions. In our own operations, our target is to reduce our scope 1 and 2 emissions by at least 80 percent by 2030 from the baseline year of 2019; by 2050, we intend to eliminate 100 percent of these emissions. When it comes to our value chain, our target is to reduce our scope 3 emissions by 25 percent by 2030 and by 90 percent by 2050, both from the baseline year of 2022.

In 2023, we updated our 2019 and 2022 baseline to take account of recent business acquisitions and divestments. We also updated our scope 3 accounting methodology.

Under our strict scenario, in 2023 our scope 3 emissions increased from 2022. The key reasons behind the increase in emissions were increased sales and IEA grid electricity emission factors.<sup>1</sup> These factors had a significant impact on ABB’s value chain emissions as 96 percent of them are associated with the use phase of our products. The 2023 emissions update highlights the non-linear path to decarbonizing the world’s grids. For our representative scenario, our scope 3 emissions had a marginal decrease due to portfolio mix changes offsetting the negative impacts above. The “Customer emissions” chapter below explains the two scenarios in detail.

By enabling our customers to increase their energy efficiency, to integrate renewables and electrify their operations, and by working with our suppliers and partners to reduce their carbon footprints, we are committed to delivering on our SBTi targets.

<sup>1</sup> IEA emission factors, <https://www.iea.org/data-and-statistics/data-product/emissions-factors-2023>

Targets	Baseline (baseline year)	2023 status
<b>LOW-CARBON SOCIETY</b>		
Reduce own scope 1 and 2 CO <sub>2</sub> e emissions by at least 80% by 2030 and by 100% by 2050	636 kilotons CO <sub>2</sub> e (adjusted for portfolio changes) 2019	151 kilotons CO <sub>2</sub> e
Reduce scope 3 CO <sub>2</sub> e emissions by 25% by 2030 and by 90% by 2050	76,834 <sup>2</sup> kilotons CO <sub>2</sub> e (2022) / 392,188 <sup>3</sup> kilotons CO <sub>2</sub> e (2022)	76,665 <sup>2</sup> kilotons CO <sub>2</sub> e / 436,346 <sup>3</sup> kilotons CO <sub>2</sub> e
Ambition to avoid 600 megatons CO <sub>2</sub> e emissions throughout lifetime of products sold from 2022 to 2030 <sup>4</sup>	65 megatons CO <sub>2</sub> e (2022)	74 megatons CO <sub>2</sub> e

<sup>2</sup> Representative scenario: Energy loss used as basis for calculations; see explanation in the “Customer emissions” chapter of this report.  
<sup>3</sup> Strict scenario: Energy input used as basis for calculations; see explanation in the “Customer emissions” chapter of this report.  
<sup>4</sup> This ambition is not part of the committed targets.



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# Customer emissions

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## Helping our customers reduce GHG emissions

Our impact on our customers' emissions is principally reflected in our scope 3 downstream emissions and our avoided emissions.

ABB's scope 3 downstream emissions are the largest contributor to our Group's GHG footprint. This is because of the substantial electric power consumed by our products. Our scope 3 downstream emissions are directly linked to the carbon intensity of the energy used by our customers, which is not within our direct control. To support decarbonization, we are innovating to integrate renewables into the energy mix, to improve the energy efficiency of our products and to provide customers with solutions that will enable them to electrify their operations. In addition, we provide our customers with information about the power consumed and emissions avoided by our offerings, the outcome of Life Cycle Assessments (LCAs) performed, and third-party-verified Environmental Product Declarations (EPDs), which are accessible via QR codes on our products.

Every division at ABB is fully committed to our company's ambition to make a positive, meaningful contribution to a low-carbon society. This includes enabling the energy transition as well as supporting the efforts of hard-to-abate industries to become more sustainable. In the second half of 2023, ABB appointed 19 division carbon accounting leads. Every ABB division and their business lines compiled detailed downstream scope 3 emissions inventories for 2022 and prepared the 2023 inventory. We used the guidance provided by the GHG Protocol to develop a bottom-up model for the wide range of offerings across all ABB divisions that allows every business line to gain a complete view of the emission impacts of its products. Each business line assessed its respective contributions to customer emissions in a consistent, standardized manner and identified high-impact areas for improvement in the future. These efforts focused on assessing GHG emissions resulting from the use of our sold products and solutions (also known as "scope 3, category 11" emissions). This view considers both the technical specifications and the operating conditions associated with each product and ensures a consistent approach for calculating scope 3 downstream and avoided emissions.

It is important to note the special challenge presented by the need to assess the energy consumption of ABB products in use at our customers' sites around the world. The emissions accounting guidance contained within the GHG Protocol is insufficient for this purpose. Moreover, our competitors have interpreted the guidance in a number of different ways. As a result, ABB has decided to publish both a "representative scenario" and a "strict scenario." The representative scenario quantifies the energy consumption of our products based on measured energy loss; the strict scenario takes a more conservative approach based on the full energy input to our products. The 2023 emissions update highlights the non-linear path to decarbonizing the world's grids, but we are confident that ABB is on the right track as we drive electrification with our customers over the mid- to long-term. Rising sales of our offerings support the decarbonization of multiple sectors, with electric motors replacing fossil-fuel combustion technology as a key example. Under both approaches, ABB increased the precision of its calculations by using real-life data sets. These data sets were drawn, for example, from an aggregated significant sample of motor-driven systems monitored by ABB Motion's smart sensor solutions.

Ninety-six percent of the Group's emissions are associated with the use phase of our products as operated by our customers. We simulated how these emissions will evolve over the coming years. The simulations considered business growth, the scaling of

renewable energy globally and the renewable energy ambitions of our key customers. This process served as the basis for ABB's submission of SBTi Net-Zero Standard aligned targets in November 2023, with validation by SBTi expected for 2024.

In 2024, ABB will bring the need for more precise guidance to the attention of the SBTi and the authors of the GHG Protocol, which will be updated for the first time after 12 years; the current guidance does not capture the critical contribution that products and solutions such as electric motors, as part of complex integrated systems, make to the energy transition.

ABB developed its avoided emissions methodology based on the 2023 guidance of the WBCSD.<sup>1</sup> In this section, we explain how we account for avoided emissions by applying the WBCSD guidance to ensure a transparent and credible approach.

We use the category of avoided emissions to describe the volume of greenhouse gas emissions that our customers will avoid by using ABB products and solutions through their full service lives.

Avoided emissions are the reduction in GHG emissions that occur because of the use of a product or solution. For both the product or solution and the reference scenario, we estimate life cycle GHG emissions. We have defined three avoided emissions scenarios: replacement, retrofit and new installation. Data is collected covering the percentage of sales and kWh/tCO<sub>2</sub>e. The data is drawn from ABB's sales teams and the product's technical specifications. Alongside the three scenarios, several factors provided by the guidance were reviewed affecting the eligibility of avoided emissions against our ambition.

#### Gate 1 (climate action credibility):

ABB transparently reports on 100 percent of its value chain emissions on an annual basis. This covers 13 of the 15 scope 3 GHG Protocol categories. Using this comprehensive GHG inventory, we have set SBTi Net-Zero Standard aligned targets for the near- (2030) and long-term (2050). In following the SBTi Net-Zero Standard, we will not be using avoided emissions to claim net-zero status or carbon neutrality.

#### Gate 2 (climate science alignment):

We do not consider avoided emissions from product lines or solutions sold to sectors and applications linked to exploration, extraction, mining, production, distribution or sale of fossil fuels.

#### Examples of ABB's climate mitigation options which lead to avoided emissions linked to mitigation options from the IPCC AR6 Working Group III Summary for Policymakers

Product category	Solution	Recognized mitigation potential
Variable speed drives (VSD)	Low and medium VSDs added to motor-driven systems to regulate load ratio of the motor so as to decrease the demand of energy input to the system itself.	Energy efficiency – Direct impact – Reduced demand for energy input of a motor-driven system.
High-efficiency low-voltage motors	High-efficiency solution replacing old, inefficient electric motors with an efficiency rate higher than installed base average.	Energy efficiency – Direct impact – Increased efficiency of a motor-driven system.
Gearless mill drives (GMD)	Installation of GMDs on grinding mills to eliminate mechanical components such as ring gears and pinions, leading to increased efficiency of the application system.	Energy efficiency – Direct impact – Increased efficiency of the application.
Electrical marine propulsion solutions	Marine propulsion units developed and installed to increase maneuverability of the ship/vessel and reduce fuel consumption.	Shipping: efficiency and optimization – Direct impact – Increased efficiency of the application and reduced fuel consumption.
Shaft generators	Generator/alternator used in the marine sector to support the main engine of a ship/vessel and increase the efficiency of power generation.	Shipping: efficiency and optimization – Direct impact – Reduced fuel consumption.
Shore-to-ship connections	Integrated systems that connect ships to the port's electricity grid via a shore-to-ship power connection and reduce consumption, pollution and noise while ship is docked.	Shipping: efficiency and optimization – Direct impact – Increased efficiency and reduced emissions of a system.

## How ABB supports our customers on avoided emissions

<sup>1</sup> <https://www.wbcsd.org/Imperatives/Climate-Action/Resources/Guidance-on-Avoided-Emissions>

## Eligibility assessment for claiming avoided emissions

**Examples of ABB's climate mitigation options which lead to avoided emissions linked to mitigation options from the IPCC AR6 Working Group III Summary for Policymakers**

Product category	Solution	Recognized mitigation potential
Selected modernization service for electrification equipment	Replacements, extensions, upgrades and retrofits of existing equipment that make it possible to avoid substituting an application package.	Material efficiency – Decarbonizing impact – Avoidance of emissions from the production of new equipment.

**Gate 3 (contribution legitimacy):**

ABB only considers avoided emissions that arise from installations that drive change within their respective markets. For example, only high-efficiency motors in a higher energy-efficiency class than the installed base average and used in a retrofit application would be eligible for inclusion. As for general applications like drives, we consider the retrofit of existing direct-on-line motor-driven systems as their main contribution to avoided emissions. In new installations of motor-driven systems, we exclude applications where the customer has already decided to install a drive; we only include sales where the customer has been convinced to install a drive with the motor, thereby improving the overall efficiency.

**Impact of ABB's avoided emissions:**

- 74 MtCO<sub>2e</sub> GHG emissions avoided by products sold in 2023 and using full life-time avoided emissions
- Products, solutions and systems generating these avoided emissions represent 8 percent of total revenue
- Ambition to avoid 600 MtCO<sub>2e</sub> by products sold from 2022 to 2030

**Sensitivities**

ABB has identified two of the assumptions used as having the greatest influence on the calculations performed: product lifetime (determined as 10–20 years depending on the product group and the conditions under which products and solutions are used, based on expert estimates and Product Category Rules where available); and the share of replacement, retrofit and new installations as a % of sales volume (based on customer visits and expert judgement). If product lifetimes were to be extended and/or the share of sales volume to change, the calculation of avoided emissions would change accordingly. Other assumptions that influence the calculations are average operating hours per year and efficiency gains, which are based on external data analysis. As ABB is focusing its innovation efforts on increasing product lifetime and improving the circularity of its products and solutions, further data sets will become available, improving the quality of calculations and leading to improving the precision of the avoided emissions calculations.

**Limitations**

**Negative side effects:**

Increased sales of these solutions may lead to increased demand for natural resources and rare metals. This can result in negative environmental consequences such as increased land and water use. ABB is fully aware of this risk and has identified circularity as a key means of mitigating the risk. To this end, we have set a target for at least 80 percent of our products and solutions to be covered by our Circularity Approach by 2030. For more detail, please see the “Preserving resources” section of this report.

**Rebound effects:**

ABB has been conservative in selecting product categories that qualify for avoided emissions. After assessing potential rebound effects, we do not believe that the lower GHG emissions impact of our products would lead to increased use of the products and therefore partly or fully cancel out the initial GHG emissions reduction enabled by the product.

**Avoided lifetime emissions (kgCO<sub>2e</sub>)**

**Avoided lifetime emissions (kgCO<sub>2e</sub>) = annual energy saved (MWh) × emission factor (kgCO<sub>2e</sub>/MWh) × lifetime (years)**

- **Annual energy saved:** Energy saved on a yearly basis when comparing the product or solution with the relevant reference scenario using the following four elements: (i) power output of the product/solution, (ii) operating hours per year, (iii)



percentage of revenues from eligible avoided emissions scenarios (replacements, retrofits, new installations), (iv) percentage of efficiency gain in each scenario.

- **Emission factor:** Weighted average emission factor based on geography of where the respective product or solution is used, using the International Energy Agency (IEA) and UN Economic Commission for Europe (UNECE) data, multiplied by regional revenue exposure.
- **Lifetime:** Average expected lifetime of the product or solution, using Product Category Rules data, when available and applicable, used also for product's or solution's Life Cycle Assessment, or expert opinion if not available.

## — How ABB's business areas are helping their customers reduce and avoid emissions

In 2023, ABB's four business areas actively engaged with their customers to enable them to reduce or avoid GHG emissions.

### **ABB Electrification**

ABB Electrification is playing a key role in the global energy transition with innovative products, components and service solutions. It enables customers in industry, infrastructure and transport to reduce their energy consumption and eliminate emissions.

In 2023, Electrification enabled Kemijoki Oy, one of Finland's largest producers of hydroelectric power and regulating power, to speed up the removal of a harmful greenhouse gas, SF<sub>6</sub>, from its electrical systems by providing an SF<sub>6</sub>-free circuit breaker retrofit solution. Additional cost-effective solutions launched by Electrification included a generator circuit breaker retrofit and the reintroduction of the Blackburn® Solar Grounding Lug, which provides contractors with an innovative grounding solution for solar panel installations.

To support decarbonization in the food and beverage industry, in 2023 we supplied a leading food and beverage company's UK factory with M4M 20 network analyzers, which work with ABB's energy management system to provide real-time data that helps save energy and reduce costs. We also provided Nordic Sugar Nykøbing with an ABB Ability™ Energy Manager solution that enables the customer to collect data, map electrical consumption and target areas for improvement. In late 2023, we provided medium-voltage switchgear for the construction of what will be the largest floating solar power plant in Southeast Asia.

### **ABB Motion**

Thanks to our industry-leading R&D investments, ABB Motion's state-of-the-art drives, motors, digital solutions and related services help our customers lower their carbon emissions while reducing costs and improving productivity, reliability and energy efficiency.

We are particularly proud of the key role Motion's advanced power technology is playing in the production of green hydrogen. Our electrolyzer power system minimizes the production network's harmonic current content and power consumption while maximizing efficiency and power factor. By reducing the levelized cost of green hydrogen production, this technology can support its rapid adoption. Motion's products, solutions and services have also supported the wind power sector since 1994 with technology and data insights that optimize the performance and longevity of wind farms. Altogether, we have made key contributions to the operation of 17,645 onshore and 1,576 offshore wind converters. Together, these wind converters account for 47.5 GW of turbine power, an enormous figure considering that 1 GW can power approximately 876,000 households.

As an example of the work we do, ABB Motion enabled Tarkett, a Swedish flooring manufacturer, to save 800 MWh of electricity per year. Based on data insights gathered from the ABB Ability™ Digital Powertrain Energy Appraisal solution, Motion replaced 10 of Tarkett's motors with IE5 SynRM motors, improving efficiency to 95 percent. Also in 2023, Motion's high-inertia synchronous condensers were combined with flywheels at the Lister Drive Greener Grid Park in the United Kingdom. The first of its kind in the world, the system compensates for the reduction in spinning inertia available to the UK's power grid caused by the transition to renewable energy.

Spinning inertia, traditionally provided by fossil-fuel-powered generators, is necessary to operate a stable power grid. This innovative, green solution will meet about 1 percent of the UK's electricity needs.

#### **ABB Process Automation**

Technologies and solutions from ABB Process Automation (PA) help our customers address the need to fundamentally transform their processes to meet decarbonization and other sustainability and efficiency goals. Most of PA's customers are companies in energy- and resource-intensive industries operating some of the most complex and essential infrastructure on the planet. Our solutions enable these customers to increase efficiency by means of electrification, automation and industrial software, to switch from fossil-fuel combustion to electric power, and to track their emissions of CO<sub>2</sub>, methane and other undesirable byproducts.

Based on our 2023 review of our scope 3 downstream emissions, some PA divisions began to work with customers to develop new business models that reduce their carbon footprints. As a result, one of our divisions was central to a 2023 memorandum of understanding signed between ABB and Tata Steel. Together, we will make system-level assessments of Tata's manufacturing plants and production facilities, evaluating and co-developing short- and long-term options for energy efficiency, decarbonization and circularity.

In May 2023, PA launched an innovative marine propulsion concept, ABB Dynafin™. Inspired by the dynamic motions of a whale's tail, it is the result of over a decade of research, development and testing. The new concept achieves extremely high levels of energy efficiency and enables ships to maneuver with remarkable precision. Also announced in May 2023, ABB is collaborating with renewables specialists Lhyfe and Skyborn in the SouthH2Port project, enabling the large-scale integration into the energy system of renewable hydrogen generated using offshore wind. Powered by Skyborn's planned offshore wind farm, the plant in Söderhamn, Sweden, will produce around 240 tons of hydrogen per day, or the equivalent of around 1.8 million barrels of oil per year.

#### **ABB Robotics & Discrete Automation**

ABB Robotics & Discrete Automation (RA) is enabling customers across a wide range of industries – automotive, general manufacturing, foundry, food and beverage, logistics and others – to reduce their emissions by optimizing output and preserving resources. Our solutions in robotics and AI help customers keep up with trends in the reshoring of industry and the development of more sustainable supply chains.

In 2023, we performed extensive life cycle assessments of our portfolio of robots, quantifying the up- and downstream scope 3 emissions associated with our products. The information will be used by RA to identify key areas where we can strengthen our support for our customers' ambitions to shrink their carbon footprints.

Over the year, we expanded our offering with four large new robots, which can provide energy savings of up to 20 percent and greater flexibility for more sustainable production methods. The higher energy efficiency was achieved by making use of ABB's OmniCore™ controller and an overall lighter robot design. The new range of robots is intended to meet the needs of the rapidly growing electric vehicle industry, as manufacturers increase production to meet regulatory targets. Customers in this sector can choose from a wide range of ABB robots, finding just the right model to handle batteries of any size, from individual cells to complete packages.





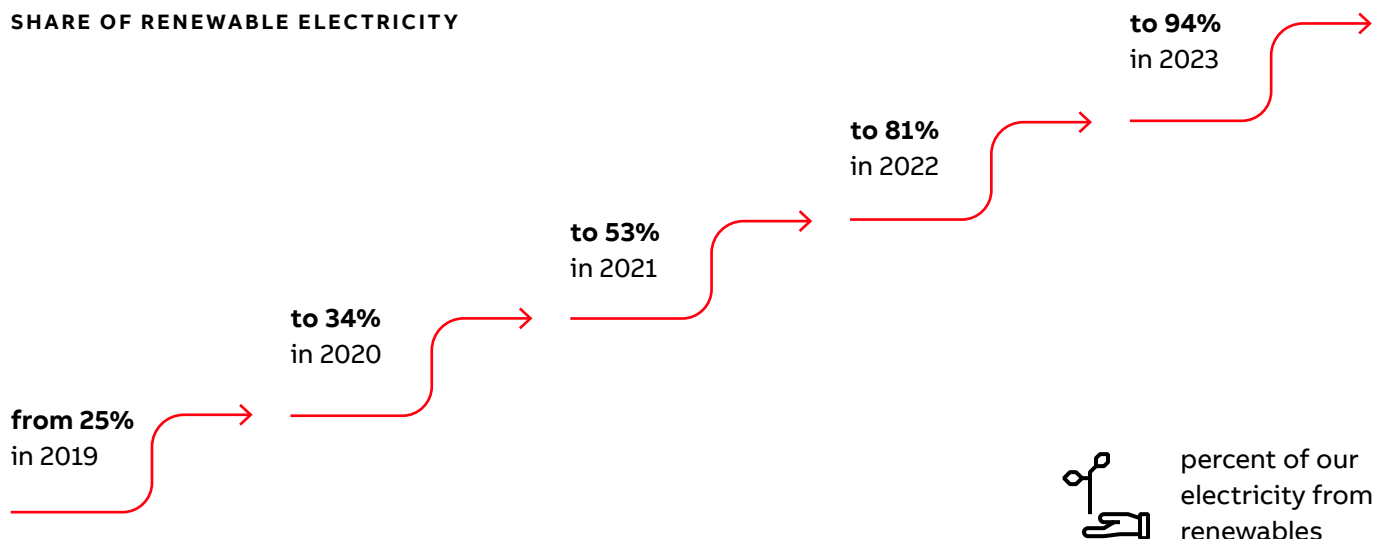


# ABB's own emissions

With respect to our own emissions, we have established science-based, net-zero-aligned targets for 2030 and 2050, which we submitted to the SBTi for validation. We are aiming to reduce our absolute scope 1 and 2 emissions by at least 80 percent by 2030 and by 100 percent by 2050, versus our 2019 baseline.

As part of our drive to make ABB a net-zero company, we have also committed to three initiatives of the Climate Group of global companies. By 2030, we will electrify our vehicle fleet, amounting to more than 10,000 cars (EV100 initiative), source 100 percent of our electricity from renewable energy sources (RE100 initiative), and improve energy efficiency and productivity across our operations (EP100 initiative). These actions will help us to reduce our scope 1 and 2 GHG emissions by at least 80 percent by 2030.

## SHARE OF RENEWABLE ELECTRICITY



Figures in the graphs are adjusted for portfolio changes.

Under the scope of the ABB Way for Health, Safety, Environment, Security and Sustainability, we have adopted the following control standards: Energy Management Requirements, Energy Management ACOP (Approved Code of Practice), Climate Change Requirements, and Climate Change ACOP. Other relevant sustainability procedures include our Fleet Electrification Procedure and Renewable Electricity Procedure.

To meet our commitments, we are engaged in a wide range of actions to prevent or mitigate potential negative impacts and risks related to our own emissions. We are switching to renewable energy – with a particular emphasis on renewable electricity – investing in heat pumps and installing solar power generation systems at our facilities. We are also implementing energy efficiency measures across our operations. These measures include installing energy-efficient lighting, upgrading our HVAC systems and implementing building automation systems that enable a high level of efficiency.

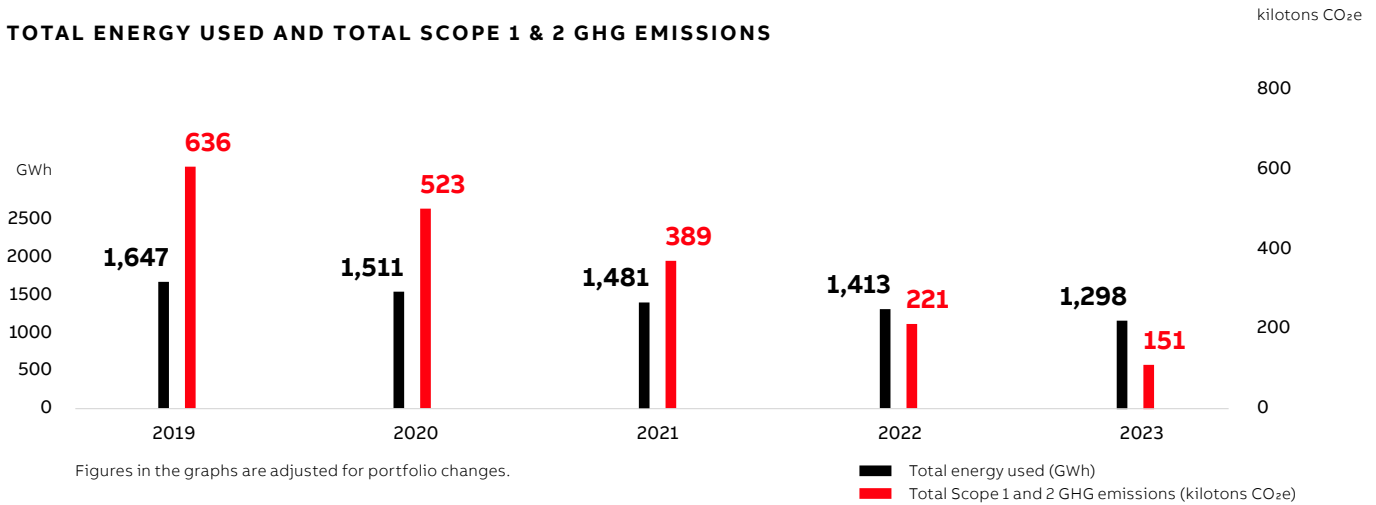
In 2023, all ABB Motion operations in Finland switched to 100-percent green district heating, powered by renewable energy systems. As part of its nearly \$100 million



investment in its greenfield campus in New Berlin, Wisconsin (USA), ABB Motion equipped the facilities with state-of-the-art building design features, including solar power, a geothermal heat pump, modern HVAC systems and advanced building controls. In South Korea, ABB Process Automation installed a solar power system at its Cheonan-si site. The solar installation is expected to generate enough power to cover as much as 40 percent of the site’s total energy needs.

ABB’s Mission to Zero™ program continued to make its mark, with nine sites joining the program in 2023. One of these, a facility in Xiamen, China, installed 100,000 square meters of solar panels – the largest such array anywhere at ABB. The energy system for the Xiamen site is proactively managed by the ABB Ability™ ZEE600 system for electrification monitoring and control. ABB Robotics & Discrete Automation also upgraded many sites, installing solar power at its refurbishment center in Mosnov, Czech Republic, and at its two factories in Shanghai. In Eggelsberg, Austria, a heat pump installed in 2023 at the facility of Robotics & Discrete Automation’s B&R subsidiary is expected to replace more than 1,800 MWh of gas consumption per year.

To track the effectiveness of our actions on our scope 1 and 2 emissions, we report on our GHG reduction efforts on a quarterly basis. In 2023, we made considerable progress toward our 2030 and 2050 goals. We reduced our total energy consumption by 21 percent, compared to a 2019 baseline. At the end of 2023, 64 percent of ABB’s energy consumption and 94 percent of its electricity was sourced from renewables. Since 2019, we have reduced our GHG emissions by 76 percent. Our shift to renewable electricity in Mexico, where we have significant operations, was a key driver of our emissions reductions in the past year.



Additionally, the ABB Real Estate function tracks progress made by its Group-level Green Real Estate program. As of 2023, the program had achieved savings of 106 GWh per year and \$13.5 million in costs from 2018 to 2023. The savings were derived from over 450 completed and ongoing energy-saving projects at ABB sites around the world. Moreover, the program supports the RE100 global commitment by increasing on-site renewable power generation capacities, with over 70 photovoltaic projects in development or completed worldwide. With over 2,400 electric vehicle chargers strategically deployed across more than 190 locations, constituting 37 percent of our global sites, we are actively driving fleet electrification (EV100). This initiative not only transforms the landscape of our infrastructure but also enables e-mobility for the convenience of our customers, employees and visitors. We also track the progress of our global program to reduce our direct emissions of SF<sub>6</sub> from losses associated with either handling or production processes. Last year, the program reduced ABB’s direct emissions of SF<sub>6</sub> by 56 percent. In 2023, we emitted 383 kilograms of SF<sub>6</sub>, down from 861 in 2022.

In 2023, 52 percent of our global new vehicle orders were for EVs or plug-in hybrid vehicles, supporting our EV100 commitment.

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# Supplier emissions

As part of ABB's Sustainability Agenda, we are committed to working with our main tier-one suppliers to reduce emissions in our supply chain. In line with the submission of our 2030 and 2050 targets to the Science Based Targets initiative (SBTi), we include scope 3 emissions associated with our suppliers. Our new net-zero-aligned target is to reduce our scope 3 emissions by 25 percent by 2030 and by 90 percent by 2050. Our work with suppliers to help them reduce emissions contributes to the achievement of our new scope 3 emissions target.

In 2023, we continued to engage with suppliers who qualify for our supply chain GHG emissions reduction program. The focus in 2023 was aimed at reducing supplier operational emissions. Before starting the collection of supplier emission data, we conducted training sessions for both our employees and suppliers to explain the aim of the program and the basics of the GHG protocol, including the differences between scope 1, 2 and 3 emissions. We also provided our suppliers with information on different actions they can take to reduce their emissions. Examples were offered from our own journey to reduce scope 1 and 2 emissions at ABB sites.

To collect supplier emissions data, we work with an external provider. Through this provider's online platform, we make additional training opportunities available to our suppliers. The platform also offers guidance to our suppliers on possible emissions reduction action plans.

We held several ABB Supplier Days to engage with our suppliers on emissions reduction programs. For example, at a Robotics Supplier Day in Shanghai, an ABB customer delivered a speech about its plans to reduce GHG emissions across its value chain and shrink the carbon footprint of its products. This peer-to-peer strategy inspired several of ABB's divisions to introduce ABB's supply chain emissions program at locally organized supplier day events.

Other actions aimed at reducing ABB's scope 3 emissions include bringing increased volumes of low-carbon and recycled copper into our production cycles, while also committing to use more recycled steel. The Process Automation business area, for example, will use low-carbon copper winding wire from Dahrén, a leading supplier, in the manufacturing of electromagnetic stirring equipment. Process Automation and Motion have also partnered with Swedish mining company Boliden to source certified low-carbon and recycled copper. ABB is also participating in Sweden's HYBRIT initiative, which aims to develop fossil-free steel.

Other examples of how we are working with our suppliers to reduce ABB's scope 3 emissions can be found in our Electrification business area. One division required each of its 200 most impactful suppliers to obtain an EcoVadis ESG scorecard; over 90 percent of these suppliers complied with the mandate, and many are now reporting their GHG emissions. Another Electrification division opened a new distribution center closer to its customers, avoiding more than 4,000 tons of GHG emissions by reducing its transportation needs by 25,000 miles per week.

In addition to measuring our progress toward our new net-zero-aligned scope 3 emissions targets, we track the impact of our supply chain GHG emissions reduction program in terms of the number of suppliers we have registered and rated in our carbon data collection tool and the proportion of suppliers who have attended our events. Other important data we track is the number of suppliers who have publicly



announced emission reduction targets, the number who have set targets with the SBTi and the number who are on track to achieve their targets. We are currently working toward collecting supplier emissions data from 2022. This process began in August 2023 and has provided us with a better understanding of the maturity of our supplier base and of where we need to focus our engagement to reach our target.

We continue to leverage lessons learned and to engage with our stakeholders to refine the actions we take to reduce supplier emissions. Our current program is based on the lessons learned from an ABB 2021-22 pilot project on how to track supplier GHG emissions. We have also incorporated lessons learned from the supplier emissions program begun by ABB Electrification's Distribution Solutions division.







# 03 Preserving resources

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# We preserve resources

Preserving resources is a key pillar of ABB's Sustainability Agenda and core to ABB's value creation model. Our 2023 double materiality assessment identified circularity as a key topic of interest to our stakeholders. Internally, we also consider biodiversity, land use, water and waste management as topics that are relevant to ensuring that ABB will be regarded a sustainable company. Our efforts to drive progress on these topics are part of ABB's value creation process.

Our Sustainability Agenda incorporates two targets to support the preservation of resources. The first is to cover at least 80 percent of our products and solutions with our Circularity Approach by 2030, which means that the requirements of the ABB Circularity Approach are met for these products and solutions.<sup>1</sup> By circularity, we are referring to increasing the share of sustainable materials in our products and packaging, reducing waste, maximizing and enabling recyclability and reusability, and extending the lifetime of our products. The ABB Circularity Approach is reshaping and improving our product portfolio by revealing the impact of our offerings through their complete life cycle.

<sup>1</sup> The circularity score of the assessed products and solutions is to be calculated once a representative share of the portfolio has been assessed.

Our second quantitative target is to send zero waste to landfill while reducing waste generation by 2030. ABB applies a rigorous approach to recycling and limiting waste generation in our operations and production processes. We are equally committed to the sustainable management of water, which represents a scarce resource in many parts of the world.

Biodiversity and land use have been newly identified internally as sustainability topics that require monitoring and continuous improvement efforts. ABB is aware of the importance of protecting the world's biological diversity and is doing its part to support the survival of plant and animal species, and the ecosystems they are a part of.

Targets	Baseline (baseline year) <sup>1</sup>	2023 status
<b>PRESERVING RESOURCES</b>		
Cover at least 80% of ABB's portfolio of products and solutions with our Circularity Approach by 2030 <sup>2</sup>	n.a.	31% <sup>3</sup> (share of ABB's products and solutions assessed)
Send zero waste to landfill while reducing waste generation by 2030	16.8 kilotons (2019), equivalent to 8.8% of total waste (adjusted for portfolio changes)	10.1 kilotons, equivalent to 6.3% of total waste

<sup>1</sup> Where a baseline applies.

<sup>2</sup> Based on revenues from hardware-based products and solutions, where granularity of financial systems allows. Service revenues are excluded.

<sup>3</sup> The circularity score of the assessed products and solutions is to be calculated once a representative share of the portfolio has been assessed.

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# Circularity

Circularity was identified by the 2023 ABB double materiality assessment as one of our company's 10 material topics. Our Circularity Approach encompasses our company-wide efforts to foster a circular economy. Beginning with the design stage, we are committed to increasing the reusability and recyclability of our products and to making them more durable by means of our lifetime extension and modernization services. Within our own operations, we avoid waste by making our processes more efficient, by increasing the use of sustainable materials in our products and packaging, and by expanding recycling activities at our sites.

Additionally, we are working closely with customers, suppliers and partners to embed circularity throughout our entire value chain. By assessing the impact of our offerings through their complete life cycle, our product managers and relevant functions identify ways to improve circularity across our product portfolio. This process encourages cooperation and partnerships with key stakeholders across industries and sectors on a wide range of activities – from recovering scrap from production to enabling take-back schemes in many markets. Our Circularity Approach is managed by the ABB Circularity Working Group, which coordinates initiatives relating to circularity among our four business areas, clarifies and updates the Circularity Approach, defines circularity KPIs, and establishes the guidelines by which the KPIs are assessed.

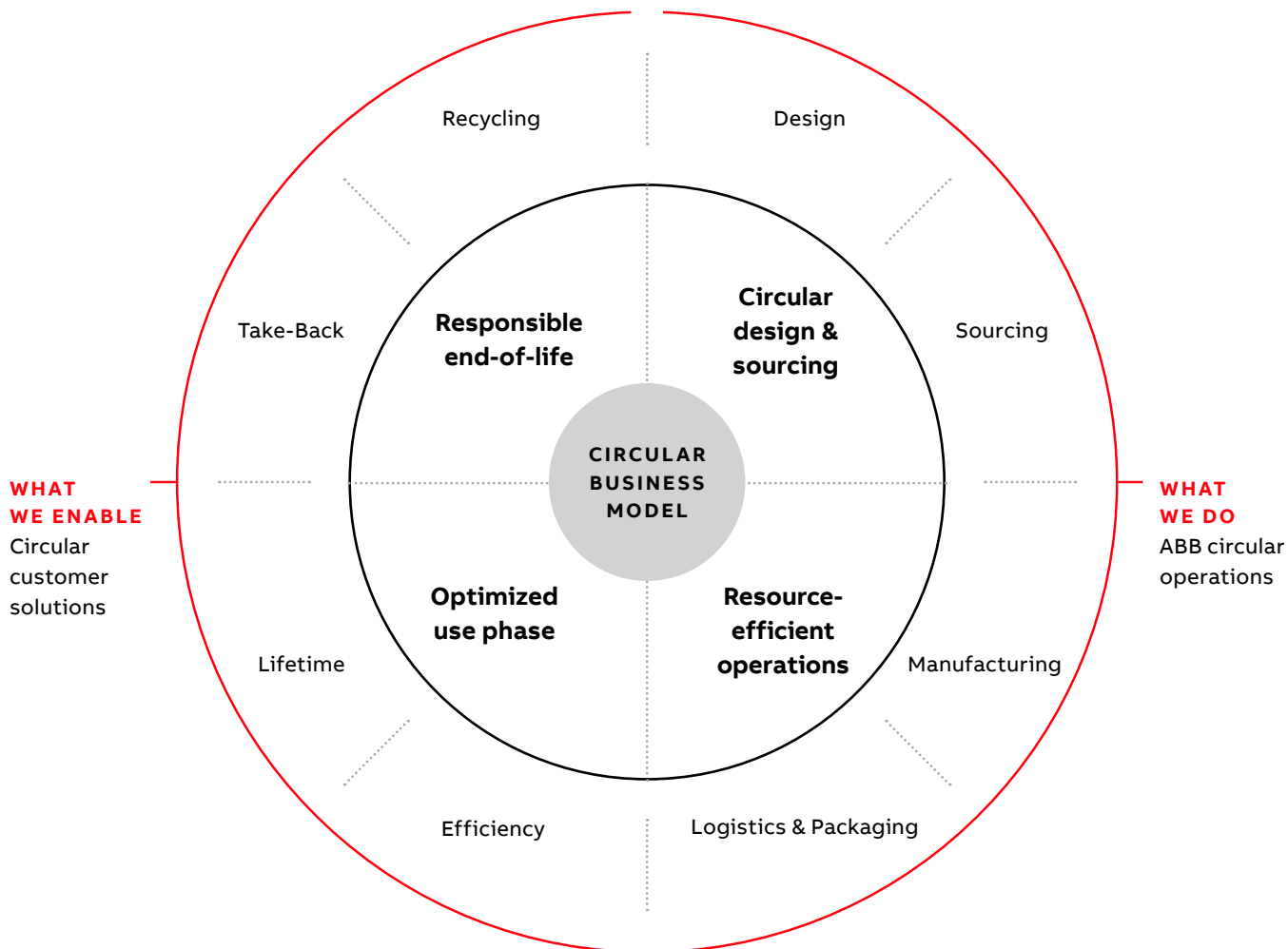
To prevent or limit any potential negative impacts or risks, the ABB Circularity Working Group annually reviews regulatory changes related to product sustainability and integrates them into the approach as needed. In 2023, the working group revised our circularity guidelines to take into consideration the latest regulatory developments (e.g., the 2023 EU Taxonomy Delegated Act) and the key sustainability standards that address circularity and product performance (e.g., GRI and SASB). The revision also addressed internal requests for changes submitted by the divisions. To support the ongoing evolution of our approach, over the past year we also reinforced our partnerships with relevant external organizations, including the WBCSD. In 2023, the working group additionally established governance mechanisms for the core processes associated with ABB's Circularity Approach.

In 2023, all four ABB business areas began assessing their products and setting baseline circularity scores for their portfolios. Where possible, the results from these assessments have been linked with our product data to make them easily accessible. Achieving progress on our product circularity assessments ranks high on our business agenda and has been tied to clear KPIs.

We will use the resulting data to evaluate our progress toward ABB's Sustainability Agenda target of covering at least 80 percent of our products and solutions with our Circularity Approach by 2030. The baseline circularity scores from the business areas will underpin the actions we take to reach our 2030 target. At the end of 2023, 31 percent of ABB's products and solutions had been assessed.



## ABB CIRCULARITY APPROACH



### Circularity in every phase of a product

As the Circularity Approach is being rolled out across the Group, the ABB business areas are implementing initiatives to improve the impact of our product portfolio across all dimensions of the product life cycle:

- In September 2023, we launched the updated ABB Product Development Gate Model, following a successful pilot phase. The model supports our new Group-wide requirement to consider circularity needs and expectations in the development of every new product. We also continue to review and modify existing product designs wherever practicable.
- The Electrification Smart Buildings division expanded the implementation of mechanically recycled or bio-circular plastics to its wiring accessories portfolio of junction boxes, socket outlets and light switches. Overall, about 1,000 tons of fossil-fuel-derived raw materials per year have been progressively replaced with more sustainable alternatives. The products are sold under the Busch-art linear brand in central Europe, Niessen Alba in Spain, and ABB SAGA in Scandinavian markets.
- ABB Motion's IE5 SynRM motor offers a good example of how ABB cooperates with key suppliers to enable greater sustainability. In a recent project, our R&D teams developed a prototype motor with a stator housing made of 100 percent recycled aluminum alloy. The motor also features low-carbon bearings, with a 70 percent smaller CO<sub>2</sub>e footprint. Taken together, the prototype achieves up to a 20 percent reduction in production-related CO<sub>2</sub>e emissions compared to our current offering.
- The Process Automation business area offers digital solutions that can also enable our clients to extend the lives of their assets through remote operations and



preventive maintenance. In 2023, we signed an agreement with SalMar to operate digital services at the remote-controlled Arctic Offshore Farming facility, located at sea off northern Norway. We will collect real-time and historical operating data from individual salmon farms and send it securely to SalMar's cloud-based database, helping to support decision-making that will improve efficiency and operations.

- ABB's robot remanufacturing teams, over the course of more than 25 years, have given thousands of used robots a second life by refurbishing or upgrading them. The controllers and manipulators of robots can be refurbished to "like-new" condition at ABB's Global Remanufacture & Workshop Repair Centers. By offering this service, ABB makes it possible for existing customers to sell their redundant robots and equipment back to us rather than scrapping or mothballing them. A life cycle assessment carried out in 2021 indicated that robot refurbishment releases roughly 75 percent fewer GHG emissions than the manufacture of a new robot. For equipment that can no longer be refurbished, ABB safely disassembles and sorts the component materials for recycling.

## Material compliance

To reduce and, where possible, eliminate the use of hazardous materials in our operations, we rely on the ABB List of Prohibited and Restricted Substances. This list applies to every aspect of our operations, including procurement, product development, production processes, products, packaging materials, service activities and construction sites.

Material compliance is a heavily regulated topic, and we update the list twice yearly in keeping with local and international regulations and legislation. These include the TSCA, Prop 65, REACH, RoHS, POP and other local material compliance legislation, both within and beyond the European Union. We are also tracking likely future regulatory requirements regarding PFAS in the EU and the United States, DPP in the EU, and the Ecodesign regulatory requirements that will come into force in 2025.

We have developed a companion guide to the list to help ABB's suppliers meet their obligations – which include partnering with us to identify and prevent restricted substances from entering ABB's supply chain. In addition, ABB's Global Terms and Conditions for suppliers and our Supplier Code of Conduct both address the subject of prohibited and restricted substances in the context of regulatory compliance.

ABB's business areas and divisions have full ownership of their respective product material compliance obligations, which include the EU requirements for chemicals and products listed in the Substances of Concern in Products (SCIP) database. In 2023, ABB's business areas continued to collect material compliance information on more than 50,000 articles and end products acquired from their supplier base. This information is securely stored in dedicated business area and/or divisional databases and is used for customer communications and product compliance statements.



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# Waste and water management

In 2023, ABB continued to track and report on its waste and water management processes. These include ABB's water usage and the sustainable management of water, which is a scarce resource in many countries. It also includes recycling and the reduction of waste generation in our operations and production processes. While ABB's production processes consume relatively little water, we have prioritized the reuse and conservation of water and all other scarce material resources on a global basis.

ABB has embraced a comprehensive range of waste and water management policies and commitments, including the [ABB Policy on Health, Safety, Environment, Security and Sustainability](#). Under ABB's Sustainability Agenda, we have committed by 2030 to send zero waste from our own operations to landfill while developing our capability to prevent waste generation. This commitment applies to non-hazardous manufacturing waste that is disposed of via landfill or incineration without energy recovery. At the same time, our 2030 commitment to apply our Circularity Approach to more ABB products and solutions also impacts how we manage waste and water.

ABB's divisions are required to adhere to several control standards related to health, safety, the environment, security and sustainability. These include the Water Management & Conservation Requirements, Water Management & Conservation Approved Code of Practice (ACOP), Water Inventory and Action Plan, Waste Management Requirements and Waste Management ACOP. ABB's sustainability procedures and guidance include our Zero Manufacturing Waste to Landfill Procedure.

These standards impose several processes designed to prevent or mitigate potential negative impacts. For example, ABB's water management standard requires sites to periodically monitor their rates of water withdrawal, use and wastewater discharge while assessing opportunities to implement new conservation measures. Sites located in areas of water stress or which withdraw more than 10,000 cubic meters of water annually are required to implement effective action plans for reducing water withdrawals. Our waste management standards require all ABB sites to continuously reduce the amount of waste generated, as well as to minimize waste at the source. Our sites are presently at varying stages of implementing the procedures for segregating, reducing, reusing and recycling waste. Some are at the beginning of their journey while others have reached the end, such as our operations in Bangalore, which were externally certified in 2023 as "zero waste to landfill" by Intertek.

We have undertaken several actions to address actual negative impacts and risks related to our water and waste management. These include our Corporate Water Inventory, covering all ABB Group companies worldwide. The inventory compiles data from 338 ABB sites and offices, covering approximately 94 percent of employees. Data for remaining employees based at non-manufacturing sites with limited impacts is estimated on a pro rata basis.

In a related field, we work with customers and suppliers to implement sustainable practices that address our complete value chain and the full life cycle of our products and solutions. For more information on this area of activity, please refer to the "Circularity" chapter in this report. We also address the environmental performance of our suppliers through our Sustainable Supply Base Management approach. For more information, please refer to the "Responsible sourcing" chapter in this report.

Among the tools we use to monitor and manage water-related risk across our operations is the World Resources Institute's Aqueduct tool. Aqueduct lets us assess ABB's facilities according to the level of baseline water stress of the local watershed. We use it to track levels of groundwater depletion, flood risk and seasonal variability of water availability at our sites.

ABB is well equipped to identify and deliver actual and potential positive impacts and opportunities related to waste and water management. After 50-plus years in the water industry and 130-plus years in the power sector, we are aware of how important it is for complex businesses to use resources efficiently and sustainably. Our solutions and expertise across water cycle applications help our customers achieve greater operational efficiency and insight into their plants' health and conditions, letting them do more with less.

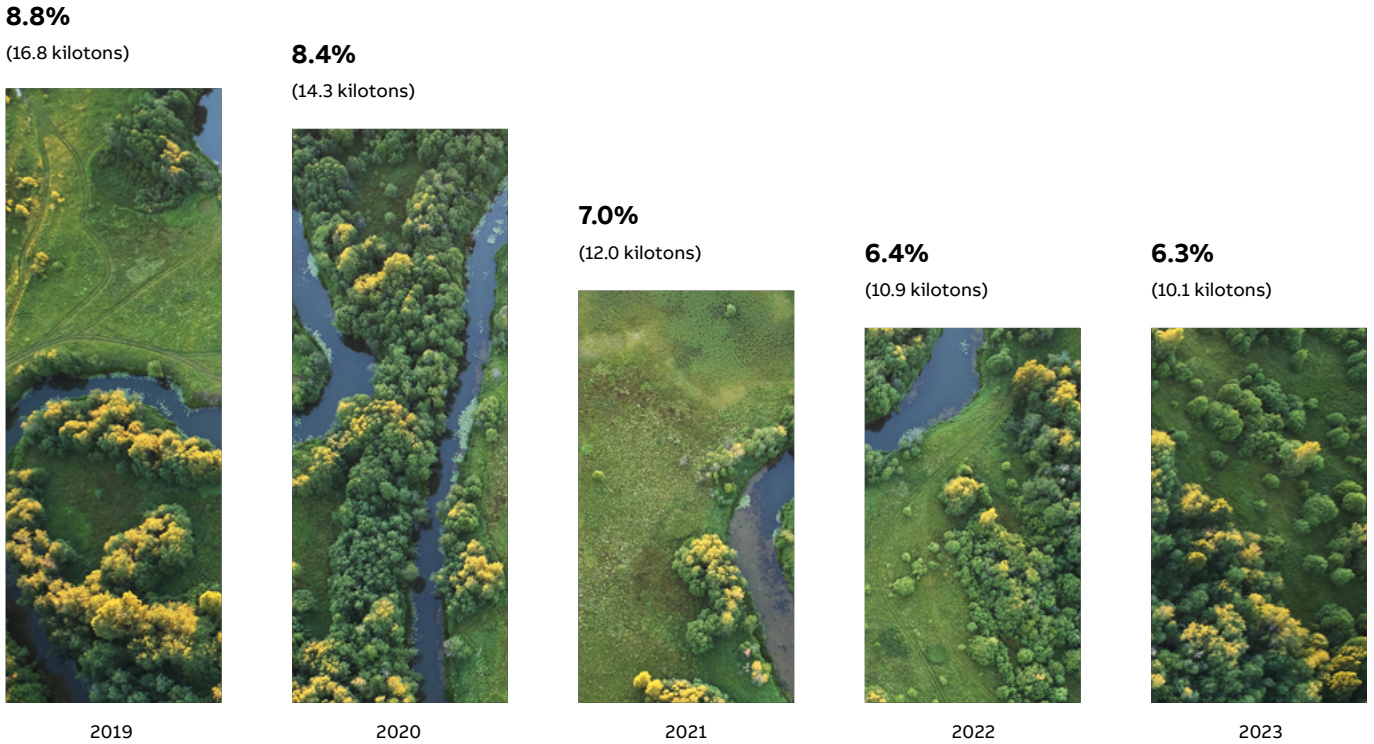
To track the effectiveness of the actions we take on water usage and waste management, we rely on the management standards described above and on information drawn from our ISO 14001 management system. Data are reported on a quarterly basis and aggregated at the corporate level. We have adopted a clear target for waste, which is to send zero waste to landfill by 2030. While we have not yet set a Group-wide target for water management, this topic is covered under the scope of the "preserving resources" pillar of ABB's Sustainability Agenda.





Globally, 50 percent of our 338 sites send zero waste to landfill, while the remaining 50 percent are making progress in the same direction. Over the course of 2023, we reduced the amount of waste that ABB generates by 11 kilotons. We implemented 37 recycling and waste reduction projects in 2023. These projects reduced the waste we generate annually by an estimated 600 tons. Of these projects, 40 percent have an expected payback period of less than two years. In total, 86 percent of our waste in 2023 was recycled, and 6.3 percent was sent to landfill, down from 6.4 percent in 2022.

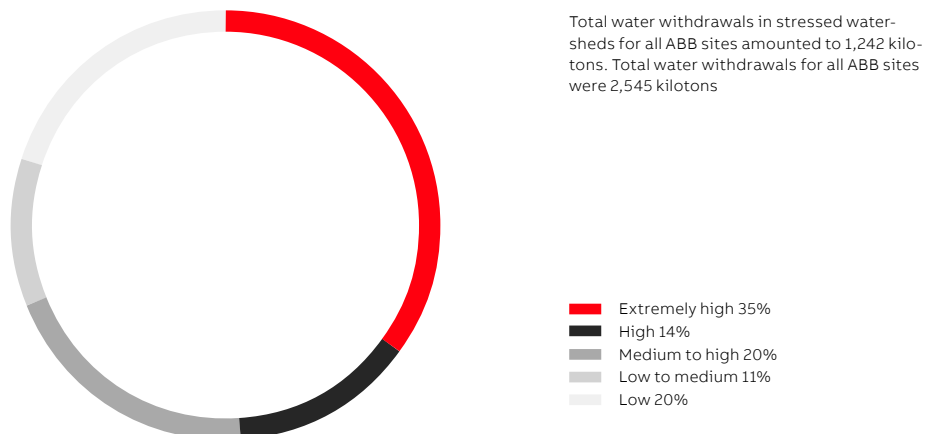
**NON-HAZARDOUS WASTE TO LANDFILL**



Figures in the graphs are adjusted for portfolio changes.

Of the 338 ABB sites mapped in 2023, 61 face an extremely high level of water stress, and 55 face a high level of water stress. For all ABB sites in stressed watersheds, total water withdrawals in 2023 amounted to 1,242 kilotons, representing 49 percent of our total water withdrawals. There are 12 projects currently under way to improve water management across ABB, with expected annual savings of 19 kilotons.

**DISTRIBUTION OF WATER WITHDRAWALS 2023**



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# Biodiversity and land use

ABB has identified the topic of biodiversity and land use as an important part of its efforts to be a more sustainable company. In discussing biodiversity, we are referring to the protection of biological and genetic diversity in the natural world. We believe that the preservation of this diversity is vital to ensuring the survival of plant and animal species and the conservation of natural ecosystems. At ABB, we are aware of the central role that land use plays in protecting biodiversity. To be sustainable, human uses of land should be minimized, and deforestation must be strictly limited or completely avoided.

ABB's Policy on Health, Safety, Environment, Security and Sustainability addresses the topic. We comply with all relevant regulations and legislation on biodiversity, land use and land contamination. We have also engaged with biodiversity as part of our EU Taxonomy reporting process, as it falls under the "do no significant harm" assessment. Our internal environmental site reporting questionnaire includes biodiversity, and we have made use of the Natura 2000 protected areas network to carry out further analysis. Notably, ABB in the United States worked with an external consultant in 2023 to assess the proximity of our sites to nature reserves and other protected areas. With respect to land use, this is not an issue on which we have a large impact, yet we are nonetheless committed to addressing it with proper care.

ABB is still at an early stage of preparing to manage the topic of biodiversity and land use. We plan to develop and implement a course of action within the next two years. We have not yet established formal mechanisms for tracking the effectiveness of our actions related to biodiversity and land use.

We are nonetheless confident that our approach to protecting biodiversity in years past has been sound, even if it did not represent a priority action item for our Group. In 2023, 13 of ABB's sites reported that they were in or near protected areas of high biodiversity value. Most of these sites are certified under the ISO 14001 standard for environmental management systems and the ISO 9001 standard for quality management systems. Globally, 80 percent of our sites are certified according to ISO 14001 and ISO 9001, based on which we identify and manage any significant environmental risks and opportunities. Many of our manufacturing sites operate in line with environmental permits issued by local authorities; these authorities regularly assess our performance.



# 04 Social progress



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# We promote social progress

Business has a crucial role to play in building a prosperous, healthy and equitable society. ABB is proud to be a good corporate citizen and to contribute to the welfare of our employees, customers, other stakeholder groups and communities worldwide. This section addresses three key topics in this area that our 2023 double materiality assessment identified as material to our business and how it impacts the outside world. These are health and safety, human rights and labor standards, and employee development and wellbeing. This section also addresses two additional topics that ABB considers to be vital components of its Sustainability Agenda. These are diversity and inclusion, and partnership and collaboration. Our efforts relating to these five topics represent a relevant part of how we create value for all our stakeholders.

Four targets have been established under ABB's Sustainability Agenda to reflect the ways we are working to promote social progress. With social progress being core to our value creation model, these targets also support us to successfully deliver value to all our stakeholders. The first is to achieve a gradual reduction in lost-time incidents – safety is paramount to our operations, and the physical wellbeing of our employees has always been a top priority. The second target is to increase the proportion of women in senior management roles to 25 percent by 2030. The third is to achieve a top-tier employee engagement score in our industry. And the fourth is to expand our programs for community engagement.

Business is inseparable from society, and ABB firmly believes that a healthy society provides the necessary preconditions for any successful enterprise. We are committed to doing our part to enable and support thriving communities and healthy social conditions.

Targets	Baseline (baseline year) <sup>1</sup>	2023 status
<b>SOCIAL PROGRESS</b>		
Zero harm to our people and contractors – we aim for a gradual reduction in lost time from incidents	0.24 (2019) <sup>2</sup>	0.13
Increase proportion of women in senior management <sup>3</sup> roles to 25% by 2030	11.7% (2019)	21.0%
Achieve a top-tier employee engagement score	71/100 (2019)	77/100
Expand programs for community engagement	n.a.	As part of the improvement process started in 2022, in 2023 we assessed our community engagement positioning and revised and expanded the scope of action, now focused on education, emergency and disaster relief, community empowerment, and environment and conservation.

<sup>1</sup> Where a baseline applies.

<sup>2</sup> 2019 baseline excludes the Power Grids business and the Turbocharging division.

<sup>3</sup> At ABB, senior managers are defined as employees in Hay grade 1-7, including Division Presidents.



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# Health and safety

ABB's 2023 double materiality assessment identified health and safety as one of our company's 10 material topics. The topic addresses the necessity of health and safety measures in the workplace and recognizes the provision of a safe workplace as a fundamental human right. At ABB, it encompasses our efforts to ensure the health and safety of our employees, contractors and supply chain partners by implementing appropriate standards and procedures and by complying with local laws and regulations. It also involves developing safe products, solutions and services based on testing and the incorporation of features to prevent accidents and injuries.

Health and safety are foremost among the standards by which ABB measures its performance. To underscore this fact, in June 2023, CEO Björn Rosengren signed an updated HSE & Security Policy that reinforces our commitment to health, safety, the environment and security. This commitment encompasses material sourcing, product design, operations and services. The updated policy includes our HSE Guiding Principles for Resilient Operations.

These principles, which are "lead with care," "engage and involve" and "learn and improve," are aimed at promoting a leadership style and work environment that allow people to do their best work, talk openly about challenges, ideas and mistakes, and make meaningful contributions to how their work gets done. We accomplish this by actively involving leaders in HSE processes such as sustainability observation tours (SOTs), self-assessments and incident investigations. Our leaders also work to facilitate a "speak-up" culture by looking beyond the safety numbers and leading with care. In formulating these principles, we benchmarked ourselves in 2023 against more than a dozen of our customers.

We actively manage health and safety, along with all of their related impacts, risks and opportunities, in several ways. We seek to address hazardous situations as soon as they are identified, and 77 percent of all reported hazards at ABB were resolved immediately in 2023. Reported incidents are categorized as minor, medium or major and are investigated accordingly. The learnings from these investigations create actionable mitigation measures that are then shared across all of ABB's business areas.

The divisions of ABB's four business areas undergo one-, three- or five-year self-assessment cycles under the HSE&S Management System and submit to an HSE audit process. Independent HSE auditors at ABB's business areas are responsible for auditing the business under our management system and for identifying areas for improvement and opportunities to implement good practices. As an essential aspect of our Guiding Principles for Resilient Operations, ABB is committed to becoming a learning organization: Instead of only focusing on learning from a limited selection of incidents, we want to learn from our daily work and proactively identify areas that can be improved.

We track the effectiveness of our health- and safety-related actions in a range of ways. In terms of processes, our Management Information System allows us to gather all relevant data on hazards and incidents and enables us, after thorough analysis, to assign actions to managers. Our on-time goal is to close 85 percent of all non-conformities reported (NCRs) through self-assessments or HSE audits within the allotted timeframe, which ranges from 30 to 90 days depending on the severity of the non-conformity. We currently have an NCR on-time closure rate of 76 percent for HSE audits and 66 percent for self-assessments.

Under the ABB Sustainability Agenda, our ambition is to cause zero harm to our people and contractors, and we aim for a gradual reduction in lost-time incidents. We achieved our internal sustainability safety target in 2023, as our lost-time injury frequency rate (LTIFR) of 0.13 declined from the 0.24 we recorded as a baseline in 2019, reaching industry-leading levels. LTIFR is defined as work-related injuries that result in at least one day away from work per 200,000 hours worked (i.e., the total hours worked by 100 full-time employees per year).

**SAFETY AT ABB**  
**LOST-TIME INJURY FREQUENCY RATE (LTIFR)**



Excludes the Power Grids business and the Turbocharging division.

<sup>1</sup> Where a baseline applies.

In 2023, ABB recorded one workplace-related fatality and zero travel-related fatalities. An investigation into the fatal incident is currently underway, and we will draw on the lessons learned to prevent any future recurrence. In spite of this fatality, the total number of serious and high-potential incidents decreased compared to 2022. We are not satisfied with this year's results and will continue to search for ways to better protect our people. ABB has built a robust safety culture over the past decade, and we are proud of the downward trend in the total number of serious incidents experienced since 2014. We nonetheless refuse to become complacent about our strong safety record.

The health aspects of our health and safety efforts are addressed in the "Employee wellbeing" chapter of this report.



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# Human rights and labor standards

Our double materiality assessment identified human rights and labor standards as one of ABB's 10 material topics. This topic addresses ABB's commitment to complying with internationally recognized standards, laws and regulations, including the elimination of child and forced labor, as well as the right to work under fair and safe conditions. It encompasses access to fair wages, the right to freedom of association and collective bargaining, respecting the rights of communities and individuals when providing security for our people and assets, and recognizing and respecting communities' land rights. We also recognize our responsibility to respect and promote human and labor rights along our value chain. This includes conducting proper due diligence on our suppliers and contractors to ensure they meet our standards for the environment, health and safety, as well as human rights and labor standards.

ABB is committed to respecting and promoting the dignity and human rights of all people, as expressed in the International Bill of Human Rights. We adhere to international frameworks to identify human rights risks and potential impacts as well as to implement appropriate measures to mitigate adverse impacts. These frameworks and tools include: United Nations' Guiding Principles on Business and Human Rights (UNGPs), OECD Guidelines for Multinational Enterprises on Responsible Business Conduct, ILO Core Conventions on Labour Standards, including ILO Convention No. 138 on minimum age for admission to employment and ILO Convention No. 182 on the worst forms of child labor, and ILO-IOE Child Labour Guidance Tool for Business.

With respect to child labor, these frameworks and standards include those which the Swiss Ordinance on Due Diligence and Transparency in relation to Minerals and Metals from Conflict-Affected Areas and Child Labor (DDTrO) specifies as internationally recognized equivalent regulations. As a result of our compliance with these frameworks and standards, we are exempted from specific due diligence and reporting obligations under the provisions of the amended Swiss Code of Obligations (Art. 964j-I CO) and the DDTrO respectively in regard to child labor.

With respect to labor standards, ABB fully honors all its requirements, whether determined by law or collective bargaining agreements. This includes the EU directive on minimum notice periods regarding operational changes. We are in close and frequent contact with the European Works Council (EWC), with a voluntary agreement to start consultation on any planned transnational changes in Europe that affect a large number of employees before beginning labor relations processes within affected countries. Whenever possible, we await the EWC statement before concluding any local labor relations process. In this confidential exchange with the EWC about planned future changes and our business outlook, we also review the effectiveness and efficiency of our consultation processes and adjust our practices when needed. Via our Global Labor Relations database, we ensure that we comply with local requirements and properly manage engagement processes for more complex projects.

Our commitment to respect and promote human rights and labor standards is underpinned by the ABB Code of Conduct, the ABB Supplier Code of Conduct and ABB's

Human Rights Policy. These codes and policies clearly set forth our expectations for every individual who works for ABB or engages with us as a business partner or through our supply chain.

ABB's goal is for human rights to be well understood and managed in all ABB operations. During 2023, we continued our work to strengthen human rights risk management and mitigation processes, with each of our business areas undertaking reviews of our salient human rights risks and Human Rights Due Diligence (HRDD) Framework.

The reviews involved wide consultations with a range of internal stakeholders and subject-matter experts, as well as desktop research. The reviews were based on the methodology used for our Group-level review in 2022 and were conducted according to the requirements of the UNGPs.

The scope of our human rights risk assessment included the 12 salient human rights issues identified during the 2022 analysis and all internationally recognized human rights, as per the Universal Declaration of Human Rights. Our four business areas identified the human rights risks for each element on their full value chains, considering all potentially affected people. Each business area consolidated its findings to assemble a high-level human rights risk map, then prioritized risks according to their severity and likelihood, enabling us to define a risk matrix, with salient human rights issues identified at the business area level. Human rights risks identified by internal and external stakeholders as part of ABB's double materiality assessment were also incorporated into the analysis.

As a result of this work, we updated our salient human rights issues as follows:

- Child labor
- Corruption and bribery
- Environmental issues impacting human rights
- Fair employment<sup>1</sup>
- Health and safety
- Human trafficking and modern slavery
- Impact on communities and land rights<sup>2</sup>
- Information security and data privacy

To review our HRDD Framework, business area teams assessed the implementation status of its six core elements (policy commitment, risk and impact assessment, risk-based measures, embeddedness, tracking and communication, and grievance and remedy), assigning them scores for 31 criteria.

This work allowed us to update and document a consolidated HRDD Framework for the Group and to identify opportunities for improvement in our human rights management processes. The resulting group roadmap places a strong focus on setting the standard for risk identification, communication and capacity building, both within ABB and along our value chain, to build broader understanding of salient risks and our mitigation actions. Business area roadmaps focus on governance enhancement, implementation of risk identification and mitigation, stakeholder engagement and awareness programs. We will monitor our performance and conduct annual reviews of our improvement plans to assess their effectiveness and define new objectives.

In December 2023, we published an updated edition of ABB's Human Rights Policy, which includes our documented HRDD Framework. The update was drafted concurrently with business area risk and HRDD reviews and incorporates feedback from internal and external stakeholders and subject-matter experts gathered during 2023, along with the requirements of the latest relevant international frameworks, standards and legislation governing responsible business practices.

<sup>1</sup> The definition of fair employment includes these previously identified salient issues: freedom of association and collective bargaining, and discrimination and harassment.

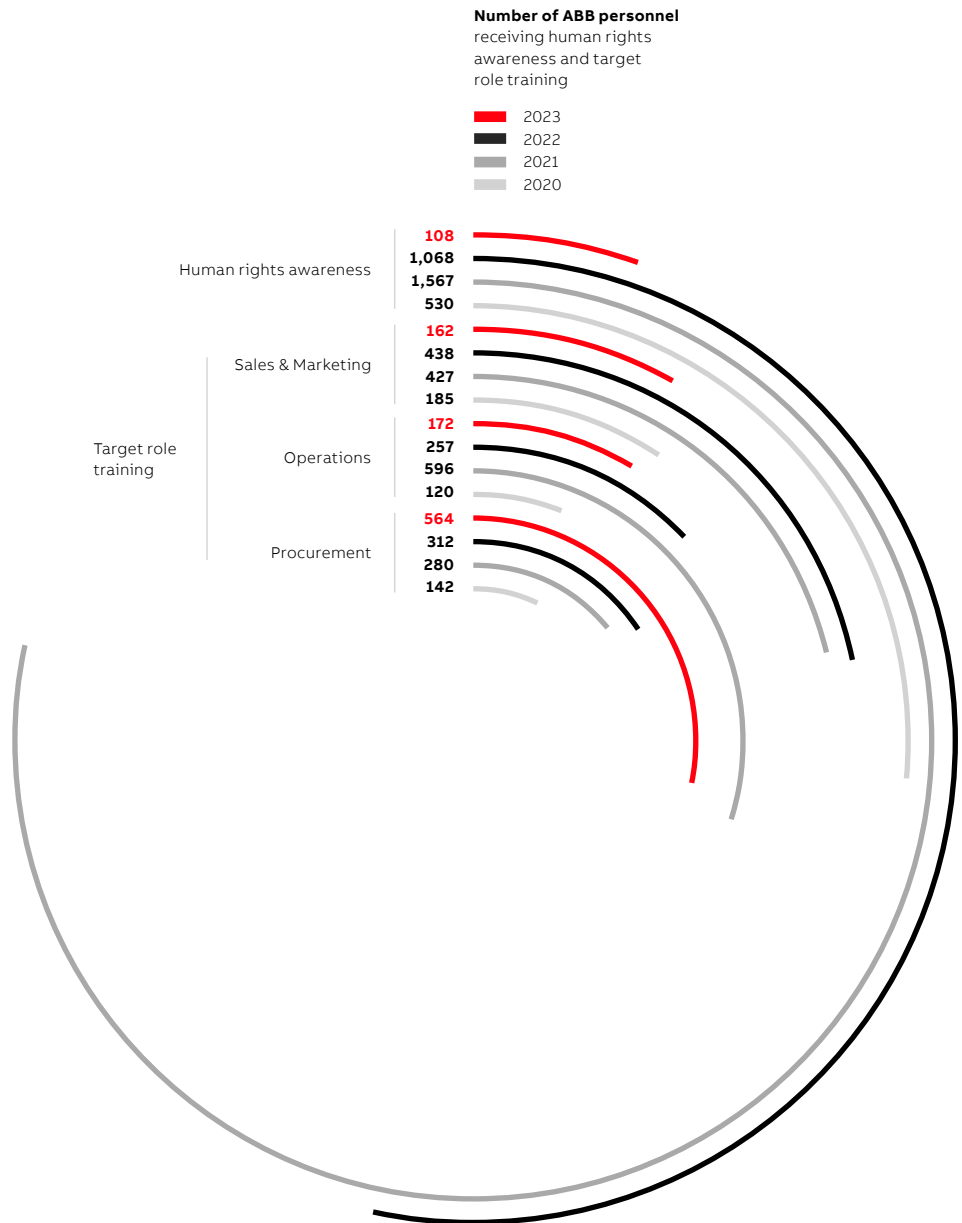
<sup>2</sup> The definition of impact on communities and land rights includes this previously identified salient issue: contributing to conflict and use of force.

Alongside the business area risk and HRDD reviews, we continued to focus on internal engagement and capacity-building to better embed human rights considerations in our day-to-day business processes. We continued to make general human rights



awareness training available to all ABB employees and managers, with 4,412 employees completing general human rights e-learning courses, and we provided targeted trainings for management and roles specifically exposed to human rights risks. We also trained and qualified a further 43 Human Rights Champions to continue embedding human rights expertise within each business area and division. Human rights and security was an increasing area of focus, with 100 percent of ABB’s security managers undergoing training on ABB’s HRDD processes and their application to our commitments to the Voluntary Principles on Security and Human Rights.

We also continued our program for conducting human rights self-assessments at selected ABB sites. In total, 78 sites in 39 countries undertook the assessments in 2023, for a total of 186 assessments in 47 countries in the period 2021–2023.



**1,840** Number of hours of instructor-led human rights training delivered to ABB personnel during 2023

During 2023, we continued to reinforce our risk screening process for major projects. In the coming year, we plan to simplify this process to enhance effectiveness and to pilot human rights risk screening processes for small projects.

To address human rights risks related to our suppliers, we rely on our Sustainable Supply Base Management system and our conflict minerals management program. For further information on these two programs, please refer to the “Responsible sourcing” section of this report.

The majority of ABB’s employees worldwide are covered by collective bargaining agreements (CBAs), either by collective labor agreements at the industry level (generally with unions) or at the company or location level (generally with employee representative bodies such as works councils or unions). Approximately 55 percent of employees are covered by internal employee representatives, and approximately 27 percent are estimated to be members of one or more of 90 trade unions around the world. In addition, the European Works Council represents more than 48,000 ABB employees, covering the majority of employees in countries belonging to the European Economic Area (EEA), UK or Switzerland.

For employees not covered by collective bargaining agreements, there are different scenarios regarding the determination of working conditions. In many countries where not all employees are represented by the CBA, among other factors the conditions in the CBA that go beyond local labor market practices are considered in determining working conditions and terms. Regardless of the application of a CBA, ABB in general aims to offer working conditions that meet or exceed the typical standards in the respective local employment markets.

ABB’s reporting and allegation management processes are available to internal and external stakeholders to address any potential violations of ABB’s Code of Conduct or other ABB policies, as well as applicable laws, including matters relating to human rights. In case of any violation of human rights or our Code of Conduct, we take steps to ensure adequate remediation and consequences in line with applicable contracts and laws. For further information on ABB’s response to the increase in harassment, discrimination and workplace respect and fairness cases recorded in 2022, please refer to the “Integrity and transparency” section of this report.

In 2023, we did not receive any reports of child labor or threats to freedom of association with respect to ABB employees. Two cases of attempted forced labor were reported by ABB service employees related to their treatment by customers. These cases were resolved satisfactorily following intervention by appropriate management and customer commitments to respect ABB’s policies regarding working conditions. During the year, we did not receive any reports of concerns regarding indigenous peoples’ rights, nor of negative impacts caused by security staff or third-party security providers. For further information about reports on these issues within our supply chain, please refer to the “Responsible sourcing” section of this report.

Our human rights programs are proving effective in several ways. As more employees are trained in human rights and labor standards, they are sending our Human Rights Champions specific suggestions for improving human rights considerations and proposing new processes to upgrade due diligence procedures, as well as volunteering to pilot those new processes.

Our growing internal awareness of human rights and labor standards has also enabled us to identify concerns related to temporary laborers. In one case, the ABB training session we conducted alerted a group of temporary laborers that their employer was not observing local labor laws with respect to timely payment of wages. In another case, our training program resulted in reports of third-party laborers not receiving appropriate annual leave from their employers. Action is under way to resolve these cases and ensure appropriate remediation is provided to the workers. These cases demonstrate how our training and due diligence processes can inform and inspire real improvements in people’s lives.



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# Employee engagement score

In 2023, we conducted our fifth annual ABB Engagement Survey. Separately, we carry out a number of more limited business- or topic-specific pulse surveys, but the ABB Engagement Survey is conducted Group-wide. It provides employees across our company with an opportunity to express their thoughts and opinions about ABB as a workplace. Since the survey was launched in 2019 to help foster a culture of collaboration and open dialogue at ABB, we have received valuable feedback about what we are doing well and what we could do better.

Every active ABB employee is invited to participate in the ABB Engagement Survey. Each year, ABB cooperates with local works councils and union representatives to ensure that the survey meets all local consultation requirements. It is available in approximately 40 languages, and participation is entirely voluntary and confidential.

By listening regularly to feedback from our employees, we mitigate the risk of failing to address critical topics at the team level. Failure to deal with such issues could lead to less motivated employees and to avoidable attrition. Over the last five years, the participation rate for the survey has continuously improved, from a response rate of 65 percent in 2019 to 84 percent in 2023.

To be transparent about the effectiveness of our actions, we share all the global survey results with employees, summarizing our overall engagement score and the most notable strengths and areas for improvement that emerged. Our business areas, divisions, country organizations and eligible teams share and discuss the feedback received.

It is our experience that the most effective actions take shape at the team level. Local teams and leaders review the feedback and suggestions before working together to identify key areas for improvement and to devise action plans to make their workplaces better and more successful. Lastly, we share stories and examples about actions taken across ABB's teams, markets, divisions and business areas. By doing so, we learn from each other and help each other meet our targets for improvement.



The survey tools supplied by our external provider identify the questions that have the strongest impact on our engagement score. We typically repeat these questions from year to year so that we can monitor the effectiveness of our actions. In addition, we carry out an analysis of all the comments provided in the survey. Each comment is categorized as positive, negative or neutral.

To evaluate our overall progress, we rely on our Sustainability Agenda target: “Achieve a top-tier employee engagement score.” Since the first ABB Engagement Survey in 2019, ABB’s engagement score has improved from 71 in 2019 to 77 in 2023. This score is the key survey metric that we track from year to year. In essence, it reflects the answers given by our employees to two core questions: “How happy are you working at ABB?” and “Would you recommend ABB as a great place to work?”

In 2023, all topics but one received a more favorable rating than in the previous year. The highest-scoring topics remained the same as last year: “safety,” “integrity” and “role clarity.” The topics that saw the most progress vs. 2022 were “challenge status quo,” “wellbeing,” “rewards,” “change adaptation” and “care.” The survey also showed that, while we have made good progress since 2019 on removing barriers to execution, there is still room for improvement.

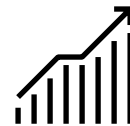
**124,808**

comments received



**84%**

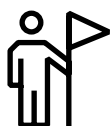
response rate  
(=88,988 employees)  
in **2023**



is an improvement compared to **82%** in **2022** and

**65%**

response rate in (baseline) **2019**



**106,046**

ABB employees invited to the **2023** Engagement Survey

in **2023** ABB received a total engagement score of

**77/100**

compared to **76/100** in **2022**

**71/100** in **2019** (baseline)

We make use of an external benchmark to determine how our survey scores compare against a broader set of companies that have posed the same survey questions to their employees through the same provider we use.

Five years after its launch, the survey has become an indispensable tool that promotes open conversations about the issues that matter to us, facilitates the sharing of best practices and fosters mutual understanding.

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# People development

People development is critical to the success of ABB. That is why we strive to give our employees the skills they need to adapt to change and stay competitive in today's constantly evolving business environment. From adapting to new technologies and pivoting in a crisis to handling tectonic shifts in our industry, our workforce must be prepared to face the future.

Our approach to people development is a key part of ABB's People 2025 strategy and is underpinned by two core policies.

The first of these is our Corporate People Development Policy, which sets forth the central features of the people development practices that apply to all employees in ABB's business areas and functions. It outlines mandatory minimum standards for each of our Human Resources (HR) focus areas: the ABB Leadership Way, Employee Engagement, the Open Job Market and our Learn, Connect, Grow approach.

Our Learn, Connect, Grow (LCG) approach seeks to create an environment that fosters the development of all our employees. As part of this approach, we provide online and offline trainings on interpersonal and leadership skills, career development resources, and opportunities for our people to connect and learn from each other in informal settings. In 2023, we launched the first edition of our annual LCG day. The event is designed to promote a culture of continuous growth. It was hosted in more than 40 countries, engaging senior leaders and over 20,000 people globally. The event was highly appreciated by our employees and served to showcase opportunities available for learning and growing, while sharing the company culture across all continents and business areas.

Our Open Job Market framework underlies our commitment to providing transparent and equal access to job opportunities at ABB. The framework applies to every ABB business area and function, mandating that all vacant office or non-production positions – including part-time, full-time and senior leadership positions – be posted in English on ABB's Internal Career Portal. The framework establishes that ABB employees can apply for any posted job at any time without restrictions. Exceptions to the framework are permitted under certain specified circumstances.

We believe that a culture that consistently allows employees to reflect on their growth objectives and provides them with the support they need to achieve them – through an open job market, learning opportunities and human connections – both prepares our workforce for challenges and safeguards their employability.

We have created a broad array of bespoke leadership courses that address the specific challenges found at every level of management in our organization. Additional leadership learning resources are made available to our employees through the Harvard Manage Mentor and Harvard Manage Mentor Spark platforms. Many more training opportunities are provided by our businesses to their respective employee populations.

We continuously refine our learning offerings to ensure they are up to date with the latest developments and requirements. To this end, we work closely with our internal stakeholders, involving them from the early design stages of these offerings. We also maintain an open dialogue with internal stakeholders regarding our existing procedures.







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# Employee wellbeing

At ABB, we strive to be an employer of choice, actively seeking to attract new employees and retain current ones. We support our employees' professional development with training programs and encourage their personal growth with work-life balance initiatives. We also make sure to keep a close eye on changes in the labor market and new workforce skills that will be needed for jobs in the future.

This report addresses several aspects of the material topic of employee development and wellbeing. It describes the support we provide for the physical and mental health of our employees. It details ABB's annual engagement survey and how our employee engagement score informs our efforts to make ABB a great place to work. It also reviews our approach to supporting personal and professional growth among our employees.

We encourage the personal growth of ABB's employees through initiatives that ensure the right balance between their professional and personal lives. In doing so, we support the wellbeing and mental health of our people around the world.

In providing employee benefits, including wellbeing benefits, our general policy is to stay aligned with local market practices on a country-by-country basis. Due to this approach, there is a risk that local market practices may not support our Sustainability Agenda or our goal to drive social progress. Thus, there are two wellbeing-related areas where we have opted to take a global rather than local approach to benefits: the global paid parental leave policy and the global Employee Assistance Program (EAP).



Under the EAP, our global provider, Workplace Options, provides the same level of wellbeing support to every ABB employee. All employees can access the EAP through our Inside+ intranet site or through an external website, as not all eligible participants have access to Inside+. This is primarily the case for ABB's production workers and the dependents of our employees.

We also comply with local legislative requirements. For example, in Mexico, all companies are required by law to identify, analyze and prevent psychosocial risks that may harm employees' physical, social and mental health, as well as to promote a positive organizational environment. The EAP has supported ABB Mexico in complying with these requirements.

The actions we take to protect employee wellbeing are principally conducted on a local basis. For example, in the United States, our "HSE Week," held in October 2023, offered several live sessions on supporting mental health and wellbeing, among other topics. In Italy, we run a wide range of wellbeing initiatives, from promoting healthy eating habits through subsidized meetings with nutritionists, to health screening programs for breast and skin cancer. And in China and Taiwan, we provide health checkups for all ABB employees. We also run global campaigns on wellbeing topics, for example, in support of World Mental Health Day. These highlight support available at the local and business area level (such as the Mental Health Training program provided by the Process Automation business area).

Our EAP provides a Rapid Response Critical Incident service that addresses urgent negative impacts and risks related to employee wellbeing. The service supports ABB employees affected by incidents such as natural disasters, accidents at work or the death of a colleague.

Programs and initiatives at both the local and Group levels deliver a range of actual and potential positive impacts and opportunities in the area of wellbeing. In China, for example, we organize sports events and clubs for employees and host a regular lecture series on mental and physical health topics.

In the United States, we actively seek feedback from our employees; we believe that our annual focus groups help us rapidly remediate benefits issues and determine whether the actions we are taking are effective. The benefits focus groups we held with ABB employees in the first quarter of 2022 and 2023 revealed that our people wanted to understand their benefits better and be able to locate related information more easily. This resulted in the launch of the [www.myBenefitsABB.com](http://www.myBenefitsABB.com) website, providing details of ABB's US benefits, in October 2023. In keeping with employee feedback, the website can be accessed from any computer or personal device without requiring the use of an ABB internal network. This approach specifically addressed the needs of ABB production employees who faced challenges in accessing the ABB network.

Our global EAP provider makes it simpler to assess the effectiveness of our employee wellbeing initiatives. It allows us to track utilization rates and rapidly identify specific areas where early intervention measures would help. It provides us with data on the mental health-related seminars and events employees have attended. And it tracks the number of hours spent on mental health support and the most popular topics viewed on the EAP portal. This data directly informs our approach to employee wellbeing.

Additionally, our global EAP provider offers a wide range of resources and training materials to support the overall wellbeing of our employees. We have set an internal goal for ABB employees either to meet or exceed the average rate at which these materials are accessed by our EAP provider's other clients. To achieve this goal, we actively publicize the kinds of support it makes available to our employees. We collect feedback from employees who use the EAP in the form of a Net Promoter Score and the ABB Employee Survey. We hope to achieve steady improvements in employee wellbeing over time as indicated by these two metrics.



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# Diversity and inclusion

Diversity and inclusion (D&I) at ABB involves developing and supporting workforce diversity across all dimensions (e.g., gender, generations, ethnicity, abilities and sexual orientation) and providing all with equal opportunities and equal treatment. We seek to cultivate an inclusive environment that welcomes and respects every individual.

We have implemented unequivocal guidelines to promote D&I across ABB. ABB's Code of Conduct additionally sets forth how we expect employees to act in matters of inclusion, respect and fairness. Under the code, all employees are expected to help keep our workplace free of harassment and discrimination. Among the commitments we have made to D&I, we are proud to have signed the CEO statement of support for the UN Women's Empowerment Principles (WEPs). ABB also supports the Standards of Conduct for Business. This UN set of guidelines aims to address discrimination against lesbian, gay, bi, trans and intersex (LGBTI) people.

In keeping with the ABB Way operating model, our four business areas and their divisions are fully empowered and accountable for translating our global D&I strategy into meaningful actions in all our markets. Collaboration on a monthly basis ensures consistency, sharing of best practices and a culture of empowerment aligned with local nuances and distinctions.

To ensure a consistent focus on the D&I agenda throughout the year, we have compiled an annual D&I calendar for the third year. The calendar provides transparency into the scheduled activities and allows for timely planning and broader engagement across all markets.

Among our Group-wide efforts to drive progress on the topic of gender equity, we conducted the #ABBSolutelyUNited campaign in honor of International Women's Day on March 8. The campaign included a virtual panel discussion in which our business area presidents and corporate heads addressed ABB's commitment to the WEPs. Unconscious bias training was made available to all employees. The campaign also reached out to a broader public, as employees shared their own stories and reflections on gender equity.

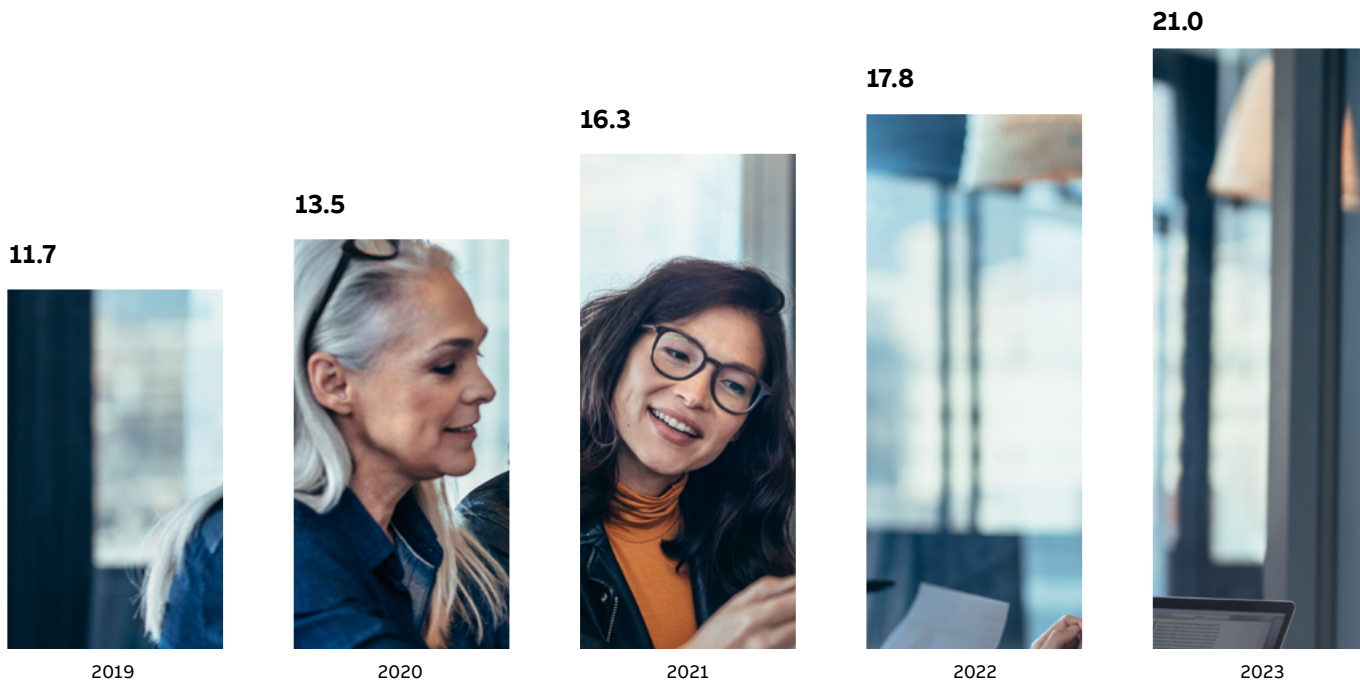
In Q2, we launched our Pride Month celebrations with the #ComeAsYouAre campaign, which drove Group-wide engagement on the topic of LGBTQ+. The lineup of events included a virtual panel discussion and initiatives covering such topics as inclusive leadership, inclusive interviewing and LGBTQ+-specific travel safety tips. Additional activities included an "Ally of the Year" prize and various learning-oriented contests. Many countries also organized activities at their local sites, with central support. In 2023, we focused on systemic changes to ensure a fair workplace for all. External assessments on LGBTQ+ inclusion (Stonewall, HRC, Workplace Pride) were conducted, we launched the allyship maturity model and app, and the employee benefit policy review was completed.

In Q3, we focused on the topic of generations and age diversity, raising awareness on ageism and how to address it effectively. These efforts were co-led by the Global D&I team and the Encompass Generations employee resource group (ERG). We also held a global panel discussion on the subject of mentorship, which stimulated additional interest in ABB's existing mentorship opportunities.

In Q4, we focused on the topic of abilities. The month of October was dedicated to raising awareness on invisible disabilities such as dyslexia, menopause and dealing with grief and loss. November featured a hackathon during European disability week, in association with Big Bloom. Employees attended a webinar from the Employee Assistance Program on the subject of mental health. In December, we released news about the onboarding of the newest Executive Committee sponsor for this topic, Karin Lepasoon, Chief Sustainability and Communications Officer at ABB.

Our efforts continue to emphasize fostering an inclusive culture and creating strong partnerships with organizations such as Catalyst, WeQual, the Society of Women Engineers, Stonewall, Open for Business and the Global Summit of Women, among others.

## WOMEN IN SENIOR MANAGEMENT



At ABB, senior managers are defined as employees in Hay grade 1-7, including Division Presidents.

To track the effectiveness of our actions in support of D&I, we draw from a range of resources, including the inclusion score in the annual employee Engagement Survey, data on the growth of ABB-affiliated ERGs, the proportion of employees receiving D&I training, and our early talent and leadership statistics. We have set four D&I targets to achieve by 2030. One of our 2030 sustainability targets – to increase the proportion of women in senior management roles to 25 percent – is also one of the targets of our Global Diversity and Inclusion Strategy 2030. In 2023, the proportion of female senior managers increased to 21.0 percent, up from 17.8 percent in 2022.

Our three additional internal targets for D&I at ABB are as follows:

- Achieve 50 percent female early talent hires
- Provide all our employees with access to employee resource groups
- Achieve yearly improvement on the inclusion scores in the annual employee Engagement Survey

In 2023, we made progress toward all three of these targets. Over the course of the year, 39 percent of our early talent hires were female, new ERGs continued to be formed across our Group while the reach of existing ERGs continued to expand, and the inclusion score in the 2023 Engagement Survey was 77, up from 76 in 2022.

# Stakeholder engagement

At ABB, we engage, interact, partner and co-develop solutions with our most relevant stakeholder groups, including collaborative partnerships, customers, employees, governments and civil society, the investment community and suppliers. We actively engage with governments and the local communities in which our products are manufactured and used, with the aim of fostering technology adoption, sound regulatory frameworks, job creation and economic growth.

We are engaged in an ongoing dialogue and close cooperation with our key stakeholder groups to ensure that ABB's policies and positions reflect their perspectives. This regular communication is crucial to determining which topics are material for both ABB and our stakeholders.

In the conduct of our daily business, we are in continuous contact with customers, employees and suppliers, among others. The transparent dialogue we carry on with investors enables them to make informed and timely investment decisions. We regularly engage with government, civil society and our collaborative partners.

In 2023, as part of the process of conducting ABB's double materiality assessment, we made some minor adjustments to how we categorize and define our different stakeholder groups. These changes are reflected here:

We highly value the partnerships ABB maintains with companies and research and academic institutions in order to collaborate on a wide range of social, environmental and technological activities and topics. These partnerships serve to foster knowledge exchange, contribute to innovation, provide access to talent, expand markets and address complex challenges in a more effective manner.

How and whom we engage:

- Collaborations with research and educational institutions
- Global Business Initiative on Human Rights (GBI)
- International Committee of the Red Cross (ICRC)
- Technology and innovation partnerships with other companies
- Technology partnerships with relevant start-ups
- UN Global Compact
- World Business Council for Sustainable Development (WBCSD)

We meet frequently with the many organizations with which ABB has current, future and past commercial relationships. They are a key driver of ABB's business success, and meeting their needs and expectations is essential to our business.

How we engage:

- Customer requests
- Customer service
- Customer trade shows
- Key account manager relationships
- Sustainability partnerships

## Collaborative partnerships

## Customers






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## Employees

We are committed to maintaining an open dialogue with current, former and future employees of ABB. This group includes formalized and/or elected bodies of employee representatives that deal with management of labor practices, among other topics. Employees bring valuable skills, drive productivity, foster innovation and contribute to ABB's culture and values. They are vital for achieving our goals and staying competitive.

How we engage:

- Annual Employee Engagement Survey
- Annual performance review
- Collective bargaining associations
- Dialogue with the ABB Employees Council Europe, the representative body of all ABB employees in Europe
- Global network of employee resource groups promoting diversity & inclusion in the workplace
- Learning and development opportunities

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## Governments and civil society

We engage with governmental, regulatory, political and economic stakeholders, local communities, the media, representatives from social and environmental organizations, non-governmental organizations (NGOs), not-for-profit organizations (NPOs) and charitable organizations, at global, national and local levels. These key stakeholders provide the political and regulatory support, social stability and public trust necessary for ABB to operate its business and achieve sustainable growth.

How we engage:

- Direct dialogue with community representatives to understand local and national needs
- Donations and volunteering
- Engagement with government agencies and other stakeholders to demonstrate the value of our products

- Meetings with regulators to understand their priorities and share our views on policy issues
- Participation in national and international initiatives to address global issues such as climate change and sustainability
- Strategic corporate partnerships

## Investment community

The investment community enables ABB's access to financial capital and includes such market participants as shareholders, debtholders, financial analysts, rating agencies and proxy advisors. We engage with these stakeholders on both financial and non-financial topics, including sustainability, governance and compensation.

How we engage:

- Annual General Meeting
- Capital markets days
- Group reporting
- Investor relations website
- Investor roadshows and conferences
- One-on-one meetings
- Press releases
- Quarterly analyst and investor webcasts

## Suppliers

We rely on trusting and stable relationships with the entities that provide products and services to ABB, including equipment and human resources. They serve a critical role in the supply chain and can have significant impacts on our operations and success.

How we engage:

- Co-development initiatives
- Early engagement during new product development
- Monitoring through our Sustainable Supply Base Management program
- On-site evaluations and audits
- Procurement management
- Providing training and engaging in special projects on sustainability performance
- Town hall and supplier day events

During 2023, we interacted regularly with our stakeholders and held sustainability-specific meetings with our investors, customers and suppliers. In addition to the regular day-to-day discourses we hold with our stakeholders, we also engaged with them for specific strategic and reporting purposes. We are particularly interested in gaining insights into how they perceive value and what matters to them most in terms of economic, environmental and social issues. The knowledge and understanding we acquire from these interactions inform our strategic decision-making and the way we manage risks and opportunities. They shape the actions we take and help us to communicate these actions in ways that maximize our transparency and accountability. By continuously engaging with our various stakeholders, we ensure that we are well positioned to identify and anticipate emerging trends, shifting customer needs and changing market expectations.

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# Community engagement

Our community engagement encompasses partnerships, projects, advocacy and philanthropic initiatives addressing topics such as climate change, education, employability, digitalization readiness, diversity, poverty alleviation and health. We also donate to charitable causes and maintain open, trustworthy and transparent communication and cooperation with all our stakeholders. Within our Sustainability Agenda, our ambition for community engagement is to provide impactful support for community-building initiatives around the world.

ABB is committed to creating a more prosperous and sustainable future for the communities where we operate. To accomplish this, we engage with our stakeholders, periodically measure our impact and promote a range of development initiatives, including employee volunteer programs. Our activities are focused on ensuring equitable access to education, leveraging technology and innovation, and enabling the energy transition.

In 2023, we proposed a new community engagement framework that will help us expand our focus while implementing a more standardized, efficient and quantifiable approach on a global basis. At the start of this process, we formed a working group to assess ABB's performance compared with our peers and other leading companies. The group drafted a proposal for the new community engagement framework, which was then revised in a cross-business area and cross-country workshop hosted by ABB in Italy. At the workshop, representatives from our 10 most active countries in the field of community engagement discussed the role ABB should play in society and proposed an ideal community engagement strategy and governance model for the Group. The framework will be revised in 2024.

The output from this workshop laid the foundation for a harmonized approach that is more capable of identifying community needs and better positioned to implement effective development initiatives. The new model, which is aligned with the ABB Way operating model, will provide greater support for cross-border collaboration and synergies, as well as for scaling up our best practices.

Our community engagement initiatives will be expanded around four focus areas (4Es): education, emergency and disaster relief, empowering communities, and the environment and conservation. The initiatives are all founded on the needs of the communities involved and are managed in close cooperation with local partners to ensure a stronger impact.

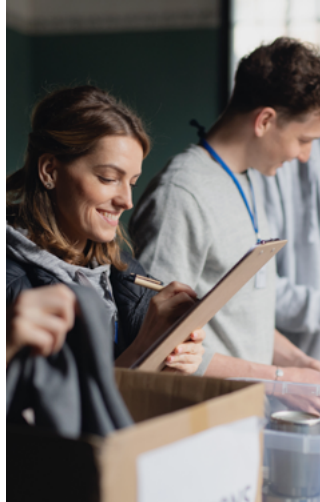


ABB'S FOCUS AREAS



**Education**

Ensure equitable access to STEM education and build the next generation's life-long competence and soft skills, leveraging technology, sustainability, renewable electricity innovation.



**Emergency & disaster relief**

Support local communities and employees impacted by natural disasters and educate our ABB community on disaster preparedness.



**Empowering communities**

Create a more prosperous and sustainable future for fragile communities where we operate, mitigating impacts and offering new development opportunities.



**Environment & conservation**

Support communities in biodiversity conservation, protecting land, marine and freshwater ecosystems, mitigating impacts and offering new development opportunities.



**Educational initiatives**

Among our many educational initiatives, in 2023 we continued a longstanding partnership with Junior Achievement, a non-profit organization that runs entrepreneurship and job training programs in Italy. Students in the program get to develop innovative business ideas and work on real projects with the guidance and support of ABB "dream coaches." Over a 20-year partnership, we have involved 1,000 volunteers and reached out to 224,400 students. Also in Italy, we held the 2023 ABB RoboCup, which gave 1,000 students from 44 schools hands-on experience in a robotics programming competition.

At the university level, staff at ABB's Ormond Beach site in the United States began to mentor their third cohort of students participating in the Federation for Advanced Manufacturing Education program (FAME). FAME students work part-time with our Ormond Beach maintenance team, receiving real-world work experience that complements their coursework at Daytona State College. In India, we initiated a school mentoring program for the 2023-24 academic year, involving 94 teachers and 4,673 students. In Finland, we donated €1 million to four universities, supporting world-class research, product development and education.

At the end of March 2023, we invited 12 prominent professors to Västerås, Sweden, for the first of four symposiums on the impact of energy-efficiency solutions in the context of climate change. Together with senior researchers from ABB Corporate Research, they spent two days discussing techniques to improve efficiency in industry, transportation and buildings, examining technology and design processes, and

assessing potential business models. The findings of the symposiums will be compiled and used to provide guidance to research funders and the EU research agenda.

In the United Kingdom, ABB and Imperial College London signed a 10-year contract in October 2023 to extend their partnership operating a pilot plant for carbon capture. The plant first opened at Imperial College in 2012 and has built a proven track record of training the engineers, scientists and other net-zero workers of the future. The only facility of its kind in the world set in an academic institution, it has given more than 4,500 students hands-on experience with ABB technologies. Imperial is one of the world's top universities, with a reputation for excellence in science and engineering.

## Emergency and disaster relief efforts

In the area of emergency and disaster relief, ABB enhanced its partnerships with the International Committee of the Red Cross (ICRC) and the International Federation of Red Cross and Red Crescent Societies (IFRC) in 2023 to support local communities in times of crisis. Over the past year, these partnerships allowed us to support communities affected by earthquakes in Türkiye and Syria. Funds from ABB were also used to support the ICRC's relief activities for people affected by the war in Ukraine.

## Community empowerment

To empower communities in 2023, we actively supported many communities' efforts to meet specific basic, local needs. As an example, ABB India partnered with HelpAge India to launch mobile healthcare units in the states of Karnataka, Gujarat, Nashik and Haryana, providing primary health services to the elderly and other vulnerable populations. Each unit serves around 1,500 individuals monthly; an estimated 70,000 people will benefit each year from the services. Another initiative we are especially proud of is our 23-year partnership with the Special Olympics; in 2023 we supported the Special Olympics World Games, held in Germany. Around 150 ABB employees volunteered at the games, where more than 7,000 athletes with diverse abilities competed.

## Environment and conservation initiatives

The environment and conservation represented a new focus area for our community engagement initiatives in 2023. Among our activities, ABB Robotics supported conservation organization Junglekeepers in its mission to protect 55,000 acres of Amazon rainforest in Peru while reversing deforestation. In a first-of-its-kind pilot program, ABB's YuMi cobot is being used to automate planting tasks at a jungle base, speeding up the reforestation process and freeing up Junglekeepers' volunteers to focus on work such as patrolling the forest to deter illegal logging, educating locals on the value of conservation and planting saplings. In another initiative, colleagues from ABB Switzerland used their new "Volunteer Day" to support Pro Natura, an organization dedicated to cleaning up forests and helping native species flourish.

To track the effectiveness of our community engagement actions, we monitor the number of countries where we ran engagement programs, the total funds we donated, the number of person-days volunteered by our employees, and the number of community projects and charities supported. Overall, in 2023, we delivered a strong performance.

### COMMUNITY ENGAGEMENT HIGHLIGHTS: OUR EMPLOYEES AND OUR BUSINESS AREAS SUPPORTED OUR COMMUNITIES

# 45

countries

# \$11.5

million donated

# 4,800

person-days volunteered

# 500+

community projects  
and charities

# 05 Integrity and transparency

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# We embed a culture of integrity and transparency

No enterprise can hope to retain its license to operate in today's world without measuring up to a high standard of integrity and transparency. Customers, employees, governments and civil society, the investment community, partners, suppliers and other stakeholders rightly expect a culture of integrity and transparency to be firmly embedded in our Group, and ABB places due weight on their expectations. This section addresses our approach to managing three core material topics related to integrity and transparency. They consist of corporate and sustainability governance, data privacy and cyber security, and responsible sourcing. Our work in these areas makes up an important component of our value creation model.

In connection with these topics, we have established four concrete targets, of which two relate to integrity: The first is to create a global framework for assessing and mitigating third-party integrity risks through risk-based due diligence and life cycle monitoring by 2030. The second is to build a global integrity program underpinned by accountability for integrity and an adaptive risk management strategy gained from insights through targeted learnings, transparent reporting and monitoring by 2030.

The other two targets are associated with transparency: The first of these is for at least 80 percent of our supply spending in focus countries to be covered by our Sustainable Supply Base Management (SSBM) approach by 2030. The 2025 mid-term target is to cover at least 80 percent of our high-risk supply spending in these focus countries by SSBM. This approach includes regular assessments of environmental, social and governance performance. The other target is for ABB to link sustainability targets to executives' variable pay.

Targets	Baseline (baseline year) <sup>1</sup>	2023 status
<b>INTEGRITY &amp; TRANSPARENCY</b>		
Global framework for assessing and mitigating third-party integrity risks through risk-based due diligence and life cycle monitoring	n.a.	<p>This target measures the implementation of a global framework for assessing third-party integrity risks. It is an ongoing and critical organization-wide, integrity-based enhancement, which strengthens how we onboard and manage the life cycle of our relationships with suppliers, sales channels and customers.</p> <p>Framework established and operational. Integrity due diligence and risk management enhancements for suppliers (buy-side) and sales channels (sell-side) launched globally.</p>
Global Integrity Program underpinned by accountability for integrity and an adaptive risk management strategy gained from insights through targeted learnings, transparent reporting and monitoring	n.a.	<p>This target measures the implementation and effectiveness of our Global Integrity Program through how we drive individual accountability for integrity and adapt our risk management strategy to real-time data insights gained from integrity-based learnings, reporting and monitoring.</p> <p>1. <b>Trust KPI</b> – the rate of severity level 1 and 2 investigations where the reporter disclosed their identity:</p> <ul style="list-style-type: none"> <li>Year 1 (January 1, 2021, to December 31, 2021): 57% of reporters.</li> <li>Year 1 and 2 (January 1, 2021, to December 31, 2022): 60% of reporters.</li> <li>Year 1, 2 and 3 (January 1, 2021, to December 31, 2023): 60% of reporters.</li> </ul> <p>2. <b>Engagement KPI</b> – the volume of unique visitors to the Integrity Awareness Portal (IAP) for integrity learnings:</p> <ul style="list-style-type: none"> <li>Year 1 (January 1, 2021, to December 31, 2021): 25% of employees with online access.</li> <li>Year 1 and 2 (January 1, 2021, to December 31, 2022): 69% of employees with online access.</li> <li>Year 1, 2 and 3 (January 1, 2021, to December 31, 2023): 80% of employees with online access.</li> </ul>

<sup>1</sup> Where a baseline applies.

Targets	Baseline (baseline year) <sup>1</sup>	2023 status
At least 80% of supply spending in focus countries <sup>2</sup> covered by Sustainable Supply Base Management (SSBM) by 2030	n.a.	Using a risk-based approach, a mid-term 2025 target has been set, focusing on high-risk suppliers in focus countries. <sup>2</sup>
At least 80% of spending on high-risk suppliers in focus countries <sup>2</sup> covered by SSBM by 2025		In 2023, we reached 42% of spending on high-risk suppliers in focus countries <sup>2</sup> covered by SSBM.
Linking sustainability targets to executives' variable pay	<p>Under the Annual Incentive Plan (AIP), a safety goal was included within the individual measure for some member of ABB's Executive Committee (EC). The individual measure had a weighting of 20 percent of the executive's target AIP (2019).</p> <p>Under the Long-Term Incentive Plan (LTIP), two performance measures with equal weighting of 50 percent were considered, namely average earnings per share and relative total shareholder return. The LTIP was awarded to around 100 executives, including EC members and division presidents. Vesting under the LTIP was subject to the achievement of the plan specific targets over a period of three years (2019).</p>	<p>Under the AIP, at least two sustainability-related performance goals are included within the individual measure for each member of ABB's EC. The individual measure has a weighting of 20 percent of the executive's target AIP.</p> <p>One of the three performance measures under ABB's LTIP is based on achievement of a corporate sustainability target and carries a weighting of 20 percent. The LTIP is awarded to around 100 executives, including EC members and division presidents. Vesting under the LTIP is subject to the achievement of the plan specific targets over a period of three years.</p>

<sup>1</sup> Where a baseline applies.

<sup>2</sup> Current focus countries are Argentina, Brazil, Bulgaria, China, Colombia, India, Indonesia, Malaysia, Mexico, Peru, Poland, Saudi Arabia, South Africa, Thailand, Türkiye and Vietnam.

At ABB, we are raising the bar for corporate and sustainability governance by working to maintain ethical business practices and systematic risk management that addresses environmental, social and legal risks. For us, ethical business behavior and good governance as well as transparency and integrity, are critical in our commitment to anti-corruption, fair competition and compliance with legal obligations within ABB and towards all stakeholders. Another vital component of our approach to corporate and sustainability governance is our regular review of the relevant processes as well as thorough due diligence. We take care to disclose our tax practices and corresponding payments and to design responsible and fair remuneration practices. We are always seeking new ways to enhance our sustainability governance structure so that sustainability is given appropriate consideration at all levels, from the Board of Directors to the operating departments.

The following two chapters – “Integrity and transparency” and “Executives' sustainability incentives” – address two different components of our approach to managing the critical topic of corporate and sustainability governance, which was identified by our stakeholders as a material topic. The third component of our approach to this material topic is addressed in the “Sustainability governance” chapter, which can be found in the first section of this report.

# Integrity and transparency

Integrity and transparency are core to our operating model. Having evolved well beyond the limits of legal compliance, we aim to embed integrity and transparency in everything we do.

Our culture of integrity and transparency is anchored in the ABB Code of Conduct and is strengthened by a range of other ABB policies and procedures. These include the ABB Supplier Code of Conduct and our five core Integrity & Regulatory Affairs (I&RA) procedures. These procedures cover I&RA oversight and responsibilities, third-party management, data privacy, conflicts of interest and global trade.

The I&RA team, which is part of the Legal & Integrity function, is responsible for driving integrity enhancements that apply to all ABB functions and business areas. The team oversees a comprehensive integrity program that can adapt to risk in real time and is fully fit-for-purpose. The result of more than 20 years of development, the program has in recent years been significantly transformed and expanded. While the I&RA program covers a variety of risk areas, below we specifically address two key operational risks which were also highlighted in the 2022 Sustainability Report: workplace behavior, and bribery and corruption.

In 2023, allegations reported internally were structured into the following categories (as well as more detailed subcategories within each of these) to ensure appropriate attention, resourcing and internal escalation:

- Antitrust & Fair Competition
- Bribery benefiting ABB
- Commercial Integrity & Regulatory
- Fraud: Non-Self-Dealing
- Fraud: Self-Dealing
- HSE & Security
- Human Resources
- Non-Integrity Issue
- Other Integrity Issue

The following table provides an overview of the number of allegations related to integrity concerns and employment actions – in addition to myriad, non-disciplinary remedial actions – resulting from integrity violations pursuant to ABB’s root-cause analysis and accountability processes:

<b>Integrity concerns</b>	<b>In 2023</b>
Allegations reported	1894
Allegations closed	1187
Allegations substantiated	341
Verbal warnings	35
Written warnings	107
Employment separations	100
Demotions, suspensions or other financial penalties	11

We have seen an increase in total allegations reported to our business ethics helpline since 2022. We attribute this to an increased confidence in our reporting and allegation management processes coupled with more in-person interactions in the wake of

## Cases reported in 2023



the pandemic. We have taken steps in 2023 to address these issues with appropriate policies, processes and training.

For example, we have updated our country policies for anti-bullying, anti-discrimination and grievances in all our key jurisdictions to reflect current legal standards and our commitment to a fair and respectful workplace that encourages a “speak-up” culture. In recognition of the return of in-person interactions since the end of the pandemic, we have also introduced new guidance for social events, designed to help our people adhere to behavioral norms in both the workplace and informal settings.

We have strengthened our investigation and remediation processes to ensure consistent and effective case management as well as consequence management. These processes enforce a zero-tolerance approach to discrimination and harassment. Additional resources have been provided to the Human Resources (HR) teams tasked with investigating and responding to complaints about poor workplace behaviors. These resources include our new HR Investigations Framework, HR Investigations Playbook and a new Disciplinary Committee Framework.

At ABB, we have zero tolerance for unethical business practices. Any abuse of power or trust for private gain is a breach of our ethical standards and Code of Conduct, and has no place at ABB. We know that having an adaptive anti-bribery and corruption (ABAC) program, which anticipates and meets risks head-on, is critical for ABB’s organizational success. During 2023, we built on the extensive and ongoing enhancements to our ABAC program and developed ABB’s new ABAC framework. It is a conceptual overview of existing key ABAC policies, procedures and controls that have been designed and implemented across our operations to prevent, detect and respond to key ABAC risks that we face as a global organization.

To inform how we continuously develop our ABAC program, we leveraged established processes – and developed some new ones – to perform targeted monitoring and testing activities throughout the year. This included testing risk scenarios in key jurisdictions, assessing the extent of implementation of enhanced policies, procedures and controls, and developing and monitoring data-driven dashboards fed by primary enterprise tools used for day-to-day business. Through this, we have identified key ABAC risks in our operations, which we are addressing through various organization-wide initiatives, including targeted face-to-face and online training of our most at-risk employees.

Our global framework for managing third-party integrity risk, which was launched in 2022, is a key pillar of our ABAC program. In 2023, the framework saw the organization-wide roll-out of enhanced mandatory integrity requirements and processes designed to identify, manage and mitigate third-party integrity risks. In 2024, the focus is to continue extending this global framework to our existing third-party population.

Among the actions we took in 2023 to mitigate specific negative impacts involving ABB’s ABAC risks, we activated our Deferred Prosecution Agreement (DPA) workplan to conduct and report on the initial review of our integrity program and remediation efforts. The workplan was developed to meet the requirements of a DPA that ABB entered into as part of a settlement with the United States Department of Justice and the Securities and Exchange Commission, announced on December 2, 2022. In 2024, we are activating and working under our first follow-up workplan for year two of the three-year DPA. The workplan is characterized by appropriate governance, a clear PMO structure, project and change management tools, and resourcing. It places ownership and accountability for its activities with ABB’s business areas and divisions, in keeping with the ABB Way operating model.

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## Anti-bribery & Corruption Program

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## Integrity Learning 2023

We refreshed and relaunched our Code of Conduct, promoting it through a global communications campaign led by our Executive Committee and supported by manager-led discussions which drive understanding of our global policies on anti-bribery and corruption and respect in the workplace. Almost 85 percent of our teams have participated in these discussions. The new code was rolled out globally under the tagline: “We speak the same code,” which was aimed at creating heightened company-wide interest in and awareness about the Code and its enhancements.

We created a series of mandatory training modules in 2023 that bring to life our expectations under the Code of Conduct. They cover the workplace behavior topics “bullying and harassment,” “equality and discrimination” and “speaking up.”

Our integrity training programs and the ABB Code of Conduct have been translated into 17 languages and provided in different formats to make them accessible to office and production staff alike. The programs have been completed by 83 percent of our people, almost 82,300 to date, and all new hires must complete our training programs as part of the onboarding process.

According to our people, these training programs help them live ABB’s values of courage, care, curiosity and collaboration. Of those who have been trained, 85 percent find the programs “effective” or “very effective.” After completing the programs, our teams make a pledge to commit to our values. The top three pledges chosen in 2023 were “speaking up if they see something that goes against our Code of Conduct,” “reporting concerns” and “becoming more familiar with the Code of Conduct.”

ABB’s integrity training program takes a hybrid approach to instruction, combining self-guided learning with bespoke, role-specific mandatory training, thereby encouraging individual ownership and accountability. It centers on the upskilling of employees in gatekeeper functions and customer-facing roles across ABB. The ABAC training program aims to enhance core ABAC competencies while highlighting the critical role these individuals play in upholding our integrity culture and compliance obligations.

In 2023, integrity-related incentives were introduced for Executive Committee members and division presidents. In addition, to improve our management of third-party risks, we expanded the application of our Third Party Management program and processes to the full third-party population in 2023. This built on our enhancement of the program in 2022, which focused initially on suppliers and sales channels. The program has strengthened our risk-based approach to choosing third parties and enabled more effective oversight and monitoring of their activities and overall performance.

Straight Talk, an internal platform for sharing real-life integrity successes and failures at ABB, serves as a strong complement to our training program and has continued to be well received throughout ABB. This transparent communications tool consolidates lessons learned and supports our speak-up culture with regular messaging about our reporting channels. It also provides key leaders with comprehensive data on our investigation portfolio, helping them set the tone from the top in their team meetings.

To track the effectiveness of our integrity-related initiatives, we utilize data analytics and conduct transaction monitoring. Our continuous monitoring platform is designed to detect ABAC and fraud risks by applying risk algorithms to data drawn from multiple company systems.

Our Integrity Analytics Report, a live dashboard available throughout ABB via our integrity web portal, provides insights into three key metrics: trust, engagement and transparency. To offer insight into ongoing and closed cases, a number of real-time and quarterly investigation dashboards are made available to the appropriate stakeholders.

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## Integrity analytics

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# Executives' sustainability incentives

ABB promotes alignment between its executives and its Sustainability Agenda by incorporating sustainability measures into its Annual Incentive Plan (AIP) and its Long-Term Incentive Plan (LTIP).

Under the AIP, at least two sustainability-related performance goals are included within the individual measure for each member of ABB's Executive Committee (EC). The individual measure has a weighting of 20 percent of the executive's target AIP.

One of the three performance measures under the LTIP is based on the achievement of a corporate sustainability target and carries a weighting of 20 percent. The LTIP is awarded to around 100 executives, including EC members and division presidents. Vesting under the LTIP is subject to the achievement of the plan's specific targets over a period of three years.

For further information, please refer to ABB's Compensation Report 2023.





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# Data privacy and cyber security

The topic of data privacy and cyber security was identified as material by ABB's 2023 double materiality assessment. This topic encompasses ABB's preventive measures in data security and privacy, cyber security, and compliance with applicable data privacy laws, such as GDPR. We ensure the protection of customer, employee and other individual privacy and personal data, and implement robust measures to protect their rights and safeguard against cyber threats. Our commitment to data security and privacy underscores our determination to maintain compliance and earn the trust of customers and stakeholders.

More details can be found at ABB's external data privacy portal: <https://new.abb.com/privacy>. Respecting the right to data protection is a priority for us, and we have adopted global data protection standards to ensure a high, standardized level of protection for personal data. We monitor and review compliance with ABB's data protection policies and applicable data protection laws by means of data protection audits, assessments and other controls. We have produced several Group-level guidelines and supporting materials for the internal use of our businesses to help them meet data privacy compliance requirements. These include the ABB Binding Corporate Rules. All ABB Group companies are committed to meeting the data privacy principles contained within the rules whenever these companies are the data controller for the personal data involved. For a summary of the ABB Binding Corporate Rules, which cover all relevant policies and commitments, please visit the data privacy portal.

To manage the topic of data privacy and cyber security, ABB has put comprehensive and robust programs in place. ABB maintains a global privacy team staffed by full-time data privacy professionals. The team is headed by the Group's Data Protection Officer, who is based in the European Union. The global privacy team supports our robust network of business and country representatives and provides various resources, including software, web portals and other support tools. All ABB employees are made aware of the basics of data privacy, and specialized training is provided for selected job functions. Training sessions cover data privacy awareness, controller versus processor responsibilities, ABB compliance tools, data transfers, privacy notices, privacy by design and contractual requirements. Employees are expected to comply with our internal policies and procedures regarding privacy and information security. External suppliers must meet comparable requirements.

Privacy by design is incorporated as an important feature of our products, projects and initiatives. Our Group has created and implemented an in-house privacy management system, which, among other tasks, handles data-related requests from individuals, maintains records of processing activities, and conducts privacy risk assessments. ABB maintains privacy and security controls across its operations, subjecting them to monitoring as well as periodic evaluations and assessments. Physical, technical and administrative controls have been implemented across our Group. Furthermore, we engage with our stakeholders and other members of society at large with the goal of understanding their perspectives and mitigating any potential problem areas. We review our systems and procedures to ensure they meet data privacy compliance requirements. These reviews form a part of our overall compliance activities.

To address specific negative impacts and risks, we have instituted comprehensive incident response and complaint handling mechanisms. And in order to manage and build on the positive effects of this work, we engage with our internal and external stakeholders to identify opportunities for growth and to achieve greater excellence in privacy and cyber security in our own supply chain, as well as in those of our customers. In general, we endeavor to promote a secure and privacy-friendly approach among our employees, suppliers and customers.

In order to monitor the effectiveness of our actions to manage data privacy and cyber security, we apply metrics to our projects and processes; we define, document and track key indicators; and we take follow-up action where appropriate. The goals, targets and indicators we use to evaluate progress are specific to each program or process. We continuously integrate feedback and seek to improve our practices in the fields of cyber security, data privacy, incident management, data subject requests and transparency, among others.

### **IT SECURITY INCIDENT IN MAY**

In May 2023, ABB became aware of an IT security incident impacting certain company IT systems. As a result of the incident, ABB started an investigation, notified certain law enforcement and data protection authorities, and worked with leading experts to determine the nature and scope of the incident. ABB also took steps to contain the incident and further enhance the security of its systems. Based on its investigation, ABB determined that an unauthorized third-party accessed certain ABB systems and exfiltrated certain data. Following a review of the data, where necessary ABB has provided notifications to individuals and organizations. To date, ABB has no evidence to suggest that any information has been misused as a result of this incident. ABB will continue to monitor this.



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# Responsible sourcing

ABB's 2023 double materiality assessment identified responsible sourcing as one of ABB's 10 material topics. This topic addresses the sustainable and responsible sourcing of materials, products and services. It covers the social and environmental performance of suppliers, as well as their adherence to ABB's requirements involving material compliance and conflict minerals. To ensure sustainable sourcing, ABB has implemented a Supplier Code of Conduct (SCoC), which complements the comprehensive and binding ABB Code of Conduct. The SCoC sets forth our requirements for suppliers in clear terms.

In November 2023, we published an updated edition of the SCoC. The update is in line with the latest relevant international frameworks, standards and legislation governing ethical and sustainable business practices. It was drafted following rigorous consultation with both internal and external subject-matter experts and was informed by our previous experiences with supplier audits, as well as by our many discussions with suppliers. We have also issued an updated implementation guide, with hands-on advice on how our suppliers can meet the requirements of the SCoC.

To prevent human rights violations in our supply chain, we substantially revised the SCoC's section on "Human rights and decent work." Among other revisions, we added more specific requirements regarding modern slavery, discrimination and diversity, as well as the rights of local communities and vulnerable groups. To reflect our intensifying efforts to mitigate climate change, we also created a separate section entitled "Climate and environment" and expanded the list of potential environmental impacts to include topics of growing interest to our stakeholders, such as GHG emissions, circularity, biodiversity and deforestation. To ensure that ABB's requirements are met along our full value chain, we updated the SCoC to explicitly require suppliers to disseminate and enforce these requirements across their own supply chains and to report any suspected violations. In 2023, we provided ABB personnel with training sessions on the updated SCoC and implementation guide. Training for our suppliers on these updates will start in Q1 2024. In-depth training on modern slavery, child labor and other SCoC-related topics will be provided to both ABB personnel and suppliers in 2024.

Our Sustainable Supply Base Management (SSBM) program, which addresses sustainability topics and performance at each stage of the supplier life cycle, forms part of our "Beyond Audit" initiative. The SSBM program integrates sustainability principles comprehensively into ABB's supplier selection and qualification processes. Through the SSBM program, we address issues in six main categories: general management, labor rights, social benefits, health, safety and the environment. The approach is backed by risk-based monitoring that covers a broad range of suppliers and incorporates Group-wide standards and targets. The management and implementation of the SSBM program is handled by ABB's four business areas. The program is governed by a steering committee comprised of representatives from our business areas and the corporate sustainability team and a working group comprised of representatives from all our divisions.

Under the SSBM program, new suppliers must complete a self-assessment that incorporates questions on how they manage issues such as labor and human rights, the environment, health and safety, and integrity, as well as how they manage their own supply chains. Depending on the results, further due diligence is carried out. In 2023, we simplified the overall supplier onboarding process, resulting in reduced lead times.



As part of this work, we reformulated several self-assessment questions on sustainability to offer greater clarity and prompt more meaningful responses.

Also in 2023, we updated our risk management review process and implemented a new tool that assesses country risk for a range of issues such as child labor, forced labor, freedom of association, adverse effects due to environmental changes, land rights and abuse of force by private or public security forces, among others. We also reviewed our portfolio of sourced materials and parts and have updated our commodity risk matrix.

To prevent or further mitigate potential negative impacts and risks related to our supply chain, in 2023 we continued to enhance the SSBM program and updated our audit procedures to include temporary labor providers. Upon carrying out audits in one pilot country in 2023, we found evidence that local labor laws were not being observed. Resolution of these cases is still pending as we work with the suppliers to remediate the problems. In 2024, we plan to expand these assessments of temporary labor providers to other countries that form part of our list of focus countries.<sup>1</sup>

2023 HIGHLIGHTS IN RESPONSIBLE SOURCING



**42%** of high-risk supply spending in focus countries<sup>1</sup> was covered by SSBM



**7** suppliers with which business was terminated due to unsatisfactory progress on their respective corrective action plans

**88%** of identified risks were closed

**118** suppliers assessed on-site

**959** ABB employees and

**95** supplier teams trained in responsible sourcing during the year

In 2023, our engagement with stakeholders at internal awareness training sessions on human rights and labor rights brought to light additional concerns related to temporary laborers at certain ABB sites. We are still working to resolve these cases. For further details, please refer to the “Human rights” chapter in this report.

Among the positive impacts and opportunities connected with sourcing at ABB in 2023, we saw a strong response to the updated sustainability self-assessment questionnaire that forms part of the SSBM program. Many of our internal training sessions focused on the role of the questionnaire and its importance to new suppliers in our simplified onboarding process. At the local level, we organized several supplier day events that spotlighted the importance of responsible sourcing and provided suppliers with an opportunity to share good practices with each other.

<sup>1</sup> Current focus countries are Argentina, Brazil, Bulgaria, China, Colombia, India, Indonesia, Malaysia, Mexico, Peru, Poland, Saudi Arabia, South Africa, Thailand, Türkiye and Vietnam.

## — Conflict minerals and other minerals of interest

To track the effectiveness of the SSBM program, we report on the reduction of risk using a KPI for “percentage of identified risks closed.” We evaluate our progress using a range of internal and external metrics. Under ABB’s Sustainability Agenda, we are aiming to cover at least 80 percent of our high-risk supply spending in focus countries with the SSBM program by 2025. This includes monitoring of environmental, social and governance performance. By 2030, we are aiming to cover 80 percent of all ABB supply spending in focus countries with the SSBM program. Our main internal target is to close 75 percent yearly of all identified risks. At the end of 2023, 42 percent of high-risk supply spending in focus countries was covered by the SSBM, and 88 percent of identified risks were closed.

Other KPIs that we use to evaluate the program include the number of supplier assessments carried out, the number of ABB employees and supplier teams trained, and the number of suppliers who have been de-sourced and removed from the approved list.

Responsibly sourcing conflict minerals and other minerals of interest is part of our responsible sourcing commitment. This is also reflected in the [ABB Policy on Conflict Minerals](#). We have established a “Conflict Minerals Program” based on the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict Affected and High-Risk Areas, and other international standards. Within this program, ABB continues its work to understand and limit its exposure to conflict minerals (tantalum, tin, tungsten and gold, or “3TG”), as defined by Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act and EU Directive 2017/821. We request information from our suppliers on the source of these minerals and work with them to avoid sourcing from smelters or refiners (SORs) in the covered countries (the Democratic Republic of the Congo and neighboring countries) and conflict-affected and high-risk areas (CAHRAs), other than those that have implemented OECD-aligned programs.

We continue to participate in smelter and refinery outreach efforts through the Responsible Minerals Initiative (RMI) and its member companies. The RMI, of which ABB is a member, is an organization working to address responsible mineral sourcing issues in the supply chain. In 2023, ABB led the RMI outreach to tin smelters in Indonesia to have them undergo the RMI’s Responsible Minerals Assurance Process (RMAP).

In addition to carefully tracking our sources for tantalum, tin, tungsten and gold, in 2023, we expanded our survey to cover the use of other minerals in ABB products. Using the Extended Minerals Reporting Template developed by the RMI, we identified pinch points and conducted due diligence on our cobalt supply chains. As we continue to expand our due diligence on other minerals, we will begin to survey our suppliers’ use of mica in 2024.

In response to the new requirements established by the provisions of the amended Swiss Code of Obligations (Art. 964j–l CO) and the Swiss Ordinance on Due Diligence and Transparency in relation to Minerals and Metals from Conflict Affected Areas and Child Labour (DDTrO), we have assessed our respective risk exposure and reached the following conclusions: The quantities of minerals and metals in scope of the aforementioned regulations which ABB imported into or processed in Switzerland in 2023 are substantially below applicable thresholds. Hence, ABB is exempted from specific due diligence and reporting obligations under the provisions of the amended Swiss Code of Obligations and the DDTrO respectively in regard to conflict minerals.



# 06 Appendix

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# Approach to reporting

This report was compiled as of February 22, 2024. We prepared the report in accordance with the provisions of the amended Swiss Code of Obligations (Art. 964a ss.) and the GRI Standards (2021). The GRI content index is available in the Appendix to this report and covers all topics deemed as material as per the materiality assessment conducted in 2023. In addition to the GRI Standards, the framework for our Sustainability Report and Integrated Report is based on the EU Non-Financial Reporting Directive (NFRD), the Sustainability Accounting Standards Board (SASB), the European Union's common classification system for sustainable economic activities, known as the EU Taxonomy, the Task Force for Climate-related Financial Disclosures (TCFD) recommendations, and the 10 principles of the UN Global Compact.

We aim to maintain alignment with best practices in our sustainability reporting and we closely follow all pertinent developments in international sustainability reporting. This includes applicable regulations such as the provisions of the amended Swiss Code of Obligations (Art. 964a ss.), the Corporate Sustainability Reporting Directive (CSRD) and the European Sustainability Reporting Standards (ESRS) in the European Union, as well as developments in voluntary reporting standards such as the IFRS Sustainability Standards.

Our Sustainability Report covers ABB's material economic, environmental, and social impacts and how we manage them. Omission from the material issues addressed in our report does not mean that an issue is not managed. In addition to our annual sustainability reporting, ABB reports quarterly on a selection of our strategic sustainability KPIs.

## Reporting boundaries

This report was prepared for the reporting period January 1 to December 31, 2023. Our formal sustainability reporting system covers all ABB Group companies worldwide, including wholly owned subsidiaries, majority-owned joint ventures and direct and indirect participations (for a list of significant subsidiaries please see the Appendix to the ABB Corporate Governance Report 2023). Newly acquired businesses are typically reflected in annual sustainability reporting in the subsequent year. Businesses that are divested in the first half of the year are typically excluded from annual sustainability reporting. For a list of acquisitions and divestments in 2023, please refer to the ABB Integrated Report 2023, page 45.

## Data collection processes

We rely on a global, online data reporting system to measure and gather data from across ABB. The system is used to file reports on hazards, incidents, sustainability observation tours and environmental performance at every production and service site, as well as most of our office locations. It is also used to collect annual social data from every country. This centralized reporting system simplifies data collection and facilitates greater transparency.

The data in this report relating to health, safety and our social performance covers 100 percent of ABB employees. Data relating to our environmental performance (including energy, emissions, water and waste) was sourced from 338 ABB sites and offices, covering approximately 94 percent of employees. Data on the environmental performance of the remaining employees, who are located at non-manufacturing sites with limited impacts, is generated by estimating energy, water and waste parameters pro rata.

## Calculation of energy and GHG data

All GHG emission factors for fuels used at our sites are sourced from the GHG Protocol's "Emission Factors from Cross-Sector Tools" (March 2017). They include the emissions of CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O. Biogenic emissions from biofuels include only CH<sub>4</sub> and N<sub>2</sub>O emission factors. Global warming potential (GWP) factors for CH<sub>4</sub>, N<sub>2</sub>O and SF<sub>6</sub> follow the IPCC's AR5 report. Emissions from ABB's vehicle fleet are based on lease contract distances and tank-to-wheel gCO<sub>2</sub>/pkm (grams of CO<sub>2</sub> per passenger kilometer). We applied lab-to-road uplift factors from the International Council on Clean Transportation Europe to better reflect our vehicles' real emissions on the road vs. the laboratory. ABB uses the market-based method to calculate and report scope 2 GHG emissions. For purchased electricity and district heating, we have obtained local emission factors from utilities. Scope 2 GHG emissions for electricity have also been calculated using the location-based method; for these calculations we sourced our data from the International Energy Agency (2023). In our 2030 Sustainability Agenda, launched in 2020, we measure our progress on scope 1 and 2 against a 2019 baseline, which is adjusted to portfolio changes. The adjusted 2019 baseline is 636 kilotons.

The results are provided for comparison below:

Scope 2 GHG emissions from electricity	Kilotons CO <sub>2</sub> e
Market-based:	12.9
Location-based:	285

Scope 3 GHG emissions are calculated using average emission factors together with inhouse data on, e.g., product performance, sales volumes, average lifetimes, and other data required to calculate emissions in the 13 out of 15 scope 3 categories that are relevant for ABB. For example, the category "Purchased goods and services" includes all upstream (cradle-to-gate) emissions for the extraction, production and transportation of goods and services purchased or acquired by ABB in the reporting year, not included in other categories. Our calculation uses secondary data, applying spend data (covering 100% of ABB's procurement) and global industry average emission factors per material consumed from life cycle inventory databases. In the category "business travel," emissions from air travel are calculated using emission factors, with radiative forcing (RF). For the category "use of sold products," we calculated the emissions due to losses in equipment such as drives, switches, switchgear and breakers during conduction, conversion, and transformation of electricity through our products. For products with a direct energy use, like motors and industrial robots, we calculated the emissions due to the electricity-use during the product's service life. For motors we have also calculated and presented numbers associated with energy loss rather than energy input, this we call the "representative" emissions. The GHG Protocol does not provide clear guidance on how to account for electrical motors as part of integrated systems. As a result, two different interpretations can be adopted: one that reflects energy loss and another that reflects energy input. To ensure transparency, ABB reports both numbers using the terms "representative" and "strict." We are working with WBCSD and WRI to formalize a standardized approach to accounting for these emissions.

Whenever estimates are used, the estimation method is explained in the footnotes.

## Estimates

## Changes in 2023

The Sustainability Report fulfills the provisions of the amended Swiss Code of Obligations (Art. 964a ss.).

Material topics covered in the GRI disclosures were amended as per the materiality assessment conducted in 2023.

Where possible, comparable information for the previous year is provided.

This report contains information for 2023 and comparable information for the previous year. Certain amounts previously reported for 2022 have been adjusted to conform to the way data is presented in the 2023 report and, in some cases, have been corrected for misstatement.

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## Independent assurance

KPMG AG has been engaged by ABB to provide independent assurance for selected GRI KPIs disclosed in the Sustainability Report, for reported progress against the 2023 sustainability targets and for compliance with the provisions of the amended Swiss Code of Obligations related to transparency on non-financial matters (Art. 964b CO). KPMG AG's full Assurance Statement, including opinion and basis of opinion, is available in the "Assurance statement" section on this report.

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## Certified ABB management system information

ISO management system standards enable organizations to improve performance by specifying repeatable steps that the organizations can implement to achieve their goals and objectives.

ISO 14001 sets forth the criteria for an effective environmental management system and maps out a framework for the implementation of such a system. ISO 50001 sets energy management standards, providing organizations with a clear way to improve energy use through the development of an energy management system. ISO 45001 is the international standard for occupational health and safety management systems. It is aimed at mitigating any factors that could harm the mental or physical wellbeing of workers:

- 79 percent of our manufacturing and service sites are covered by a certified environmental management system (ISO 14001 or equivalent)
- 81 percent of our employees at manufacturing or service sites are covered by a certified occupational health and safety management system (ISO 45001 or equivalent)
- 36 percent of our energy use at manufacturing or service sites is covered by a certified energy management system (ISO 50001 or equivalent).

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## Additional disclosures

All of ABB's policies, procedures and declarations related to the topic of sustainability can be found on our Group website.



# Swiss Code of Obligations: transparency on non- financial matters

This Sustainability Report also covers the reporting requirements as defined by the provisions of the amended Swiss Code of Obligations related to transparency on non-financial matters. For easy reference, please find below a table with links to the relevant sections:

<b>Swiss CO – Art. 964b paragraph 2</b>	<b>Reference</b>	<b>Page</b>
1. Description of the business model	The ABB Way	6
2. Description of policies adopted in relation to:		
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# Independent limited assurance report on selected sustainability information in ABB Ltd's Sustainability Report 2023

## To the Board of Directors of ABB Ltd, Zurich

We have undertaken a limited assurance engagement on ABB Ltd's (hereinafter «ABB») following selected Sustainability Information in the Sustainability Report for the year ended December 31, 2023 (hereinafter "Sustainability Information").

- Global Reporting Initiative (GRI) related KPIs (which are marked as 'Limited assurance 2023')
  - 301-1 Materials used by weight and volume
  - 302-1 Energy consumption within the organization
  - 302-3 Energy intensity
  - 305-1 Scope 1 GHG emissions
  - 305-2 Scope 2 GHG emissions
  - 305-3 Scope 3 GHG emissions
  - 305-4 GHG emissions intensity
  - 403-9 Occupational health and safety
- Avoided Emissions
  - The 2023 status on avoided emissions ambition reported in the ABB sustainability targets table on pages 9 and 10 of the Sustainability Report.
- ABB sustainability targets
  - The 2023 status for the ABB sustainability 2030 targets within the tables presented on pages 9 and 10 of the Sustainability Report.
- Non-financial disclosures
  - Non-financial disclosures, prepared in accordance with article 964b of the Swiss Code of Obligation, as included in the index table on page 80 of the Sustainability Report.

Our assurance engagement does not extend to information in respect of earlier periods or to any other information included in the Sustainability Report or within the ABB Annual Reporting Suite (consisting of the Integrated Report, the Financial Report, the Corporate Governance Report, and the Compensation Report) or any other information linked to from the Sustainability Information or from the Sustainability Report, including any images, audio files or embedded videos.

## Understanding how ABB has Prepared the Sustainability Information

ABB prepared the Sustainability Information using the following criteria (hereinafter referred to as the "Sustainability Reporting Criteria"):

- For Global Reporting Initiative (GRI) related KPIs - GRI Standards;
- For avoided emissions - internally developed criteria and methodology based on Guidance on Avoided Emissions, issued by the World Business Council for Sustainable Development (WBCSD), as included on pages 23 to 25 of the Sustainability Report;
- For ABB sustainability targets – GRI Standards for Environmental and Zero harm target, and ABB self-developed criteria for the remaining of the ABB sustainability targets;
- For the non-financial disclosures referenced in the index table on page 80 of the Sustainability Report – article 964b of the Swiss Code of Obligation.

Consequently, the Sustainability Information needs to be read and understood together with the Sustainability Reporting Criteria, including the self-developed criteria. We believe that these criteria are a suitable basis for our limited assurance engagement.



### Our Limited Assurance Conclusion

Based on the procedures we have performed as described under the ‘*Summary of the work we performed as the basis for our assurance conclusion*’ and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Sustainability Information is not prepared, in all material respects, in accordance with the Sustainability Reporting Criteria.

We do not express an assurance conclusion on information in respect of earlier periods or to any other information included in the Sustainability Report, Annual Reporting Suite or any other Report, including any images, audio files or embedded videos. Our conclusion does not extend to the requirements of Swiss Code of Obligation article 964 (d-I).

### Inherent Limitations in Preparing the Sustainability Information

Due to the inherent limitations of any internal control structure, it is possible that errors or irregularities may occur in disclosures of the Sustainability Information and not be detected. Our engagement is not designed to detect all internal control weaknesses in the preparation of the Sustainability Information because the engagement was not performed on a continuous basis throughout the period and the audit procedures performed were on a test basis.

The calculation of avoided emissions described on pages 23 to 25 of the Sustainability report includes several inherently judgmental assumptions derived from internal ABB sources and analyses and external data for comparison purposes is limited or not available. In time, as the external guidance in the sector evolves and data precision improves, the determination of avoided emissions will be subject to less judgement and less estimation uncertainty.

### ABB’s Responsibilities

The Board of Directors of ABB is responsible for:

- Selecting or establishing suitable criteria for preparing the Sustainability Information, taking into account applicable law and regulations related to reporting the Sustainability Information;
- The preparation of the Sustainability Information in accordance with the Sustainability Reporting Criteria;
- Designing, implementing and maintaining internal control over information relevant to the preparation of the Sustainability Information that is free from material misstatement, whether due to fraud or error.

### Our Responsibilities

We are responsible for:

- Planning and performing the engagement to obtain limited assurance about whether the Sustainability Information is free from material misstatement, whether due to fraud or error;
- Forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- Reporting our independent conclusion to the Board of Directors of ABB.

As we are engaged to form an independent conclusion on the Sustainability Information as prepared by the Board of Directors, we are not permitted to be involved in the preparation of the Sustainability Information as doing so may compromise our independence.

### Professional Standards Applied

We performed a limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised) *Assurance Engagements other than Audits or Reviews of Historical Financial Information*, issued by the International Auditing and Assurance Standards Board (IAASB) and in respect of greenhouse gas emissions, with the *International Standard on Assurance Engagements (ISAE 3410) Assurance Engagements on Greenhouse Gas Statements*, issued by the International Auditing and Assurance Standards Board.





### Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the *International Code of Ethics for Professional Accountants (including International Independence Standards)* issued by the International Ethics Standards Board for Accountants (IESBA Code), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality, and professional behavior.

Our firm applies International Standard on Quality Management 1, which requires the firm to design, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our work was carried out by an independent and multidisciplinary team including assurance practitioners and sustainability experts. We remain solely responsible for our assurance conclusion.

### Summary of the Work we Performed as the Basis for our Assurance Conclusion

We are required to plan and perform our work to address the areas where we have identified that a material misstatement of the Sustainability Information is likely to arise. The procedures we performed were based on our professional judgment. Carrying out our limited assurance engagement on the Sustainability Information included, among others:

- Assessment of the design and implementation of systems, processes and internal controls for determining, processing and monitoring sustainability performance data, including the consolidation of data;
- Inquiries of employees responsible for the determination and consolidation as well as the implementation of internal control procedures regarding the selected disclosures;
- Inspection of selected internal and external documents to determine whether quantitative and qualitative information is supported by sufficient evidence and presented in an accurate and balanced manner;
- Assessment of the data collection, validation and reporting processes as well as the reliability of the reported data on a test basis and through testing of selected calculations;
- Analytical assessment of the data and trends of the quantitative disclosures included in the scope of the limited assurance engagement;
- With respect to the avoided emissions calculated by ABB, we reviewed the internally developed methodology based on the World Business Council for Sustainable Development (WBCSD) guidance, inquired management about the assumptions applied and the sources behind them and reviewed whether the calculation was performed in line with the methodology;
- Checking that the Sustainability Report contains the information required by article 964b(1) and (2) to understand the business performance, the business results, the state of the undertaking and the effects of its activity on environmental matters, social matters, employee-related matters, respect for human rights and combating bribery and corruption;
- Assessment of the consistency of the disclosures applicable to ABB with the other disclosures and key figures and of the overall presentation of the disclosures through critical reading of the Sustainability Report.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

KPMG AG

Achim Wolper  
Licensed audit expert  
Zurich, February 22, 2024

Mohamad Midani

# Material topic descriptions

## Business performance and resilience

2023 ABB double materiality assessment – material topic, impact and risk descriptions:

### TOPIC DESCRIPTION

This topic refers to ABB’s financial performance and the effective management of business risks. Its focus is on our ability to adapt and succeed in challenging conditions while ensuring sustainable operations and delivering desired results. It refers not only to achieving results in terms of growth, profitability and capital efficiency that ensure financial stability, but also to the way we manage and protect our people, especially in crises such as pandemics. The topic extends to ensuring that our customers receive the products and services they need in the way that they want them.

### IMPACT MATERIALITY

Through our activities and management of business risks, we ensure that ABB is stable and able to create financial value and stability for customers, shareholders, employees and other stakeholders. Furthermore, we ensure the delivery of product offerings that positively impact the environment and enable the energy transition, such as our energy-efficient products and solutions. Additionally, we can have positive impacts on the economy by providing employment opportunities and sourcing materials locally, thereby supporting local businesses sustainably and over the long term. It should be noted that projects in high-risk areas could have negative impacts not only on local communities but also on the environment.

### FINANCIAL MATERIALITY

Having a resilient and financially stable business positively impacts the long-term success of ABB and protects our company’s financial and legal security as well as its reputation. It also enables us to overcome challenges, reinvest in operations and take advantage of new opportunities. This in turn has positive impacts on ABB’s business continuity, builds stakeholder confidence and guides strategic decisions. Without a resilient business plan and strategy, a company’s ability to perform, retain employees and maintain business continuity could be compromised.

### PRINCIPAL RISK: ECONOMIC SLOWDOWN

Risk description	Example of risk responses	Effectiveness of the risk response
Potential recessions across leading economies, increase in inflation and interest rates globally and a deterioration of macroeconomic factors in China could all lead to a drop in demand and reduced financial performance.	<ul style="list-style-type: none"> <li>Identification of growth areas, revenue opportunities and cost reduction measures.</li> <li>Assessment of short-, mid- and long-term economic developments to identify market and demand shifts.</li> </ul>	Financial targets (Financial report).

## Circularity

### TOPIC DESCRIPTION

This refers to ABB’s company-wide efforts to invest in the circular economy. We aim to cut waste, increase recyclability and reusability and make our products more durable. Additionally, we work closely with customers and suppliers to embed circularity across our value chain. Within our own operations, we strive to avoid waste by making our products and processes more efficient and maximizing the use of sustainable materials for packaging.

### IMPACT MATERIALITY

We can support economic growth by developing innovative and “retrofitted” products and services that promote the circular economy. We aim to help protect the environment by reducing waste through our products and services, which in turn lowers environmental impacts such as air and water pollution. We are well aware that we need to pay attention to water usage in water-scarce areas. We can also have a positive impact on human rights in our value chain and encourage customers and suppliers to adopt responsible and sustainable practices. At the same time, cost-efficient sourcing of materials or transitioning to alternative raw materials could lead to sourcing from regions where social and environmental standards are lower, thereby negatively impacting the environment and society. Lack of understanding of the broader impacts of circularity can lead to unintended negative impacts on people and the environment, such as loss of income for those employed in the informal waste sector.

### FINANCIAL MATERIALITY

Our efforts to increase recyclability and reusability can reduce waste and conserve resources, while also reducing costs. Furthermore, by demonstrating our commitment to the circular economy, we can differentiate ourselves from competitors, positively impacting our business and brand reputation while opening up new opportunities for growth and innovation. When it comes to take-back systems, which are increasingly in demand from customers, there is a risk of missing out on a business opportunity because these offerings are not yet mature. Finally, being less dependent on scarce raw materials would improve the resilience of our supply chain.

### PRINCIPAL RISK: MISSED MARKET OPPORTUNITIES

Risk description	Example of risk responses	Effectiveness of the risk response
Not increasing our circularity may lead to missed market opportunities.	Increasing the company's circularity	Circularity targets (Sustainability Report 2023: Preserving resources, Circularity).

## Climate

### TOPIC DESCRIPTION

This refers to ABB's role as a global technology company that is driving the shift towards a low-carbon economy. Through our expertise in electrification and automation, we enhance energy efficiency throughout the life cycle of our products and enable the integration of renewable energy. Also covered in this topic is energy efficiency in our own operations as well as the procurement of renewable energy and the handling of the potent greenhouse gas, SF<sub>6</sub>. We actively work with customers and suppliers to offer energy-efficient solutions and reduce emissions across the supply chain, demonstrating our commitment to reducing greenhouse gas emissions and supporting the transition to a low-carbon society.

### IMPACT MATERIALITY

We actively work to reduce the carbon footprint of our own operations and implement sustainable practices. By focusing on energy and carbon footprint reductions, we enable our customers and suppliers to reduce their environmental impact. Additionally, our commitment to supporting sustainable solutions not only benefits the environment but also contributes to job creation and supports clean energy generation. Through our products, services and solutions, we set an example for other companies and demonstrate the importance of corporate responsibility in addressing climate change and promoting a low-carbon economy. The transition to a low-carbon economy can have a negative impact on individuals or communities through local job losses or lack of access to affordable technology. The energy transition also will require significantly increased extraction of certain minerals, many of which are mined in regions with low enforcement of basic environmental and labor standards.

### FINANCIAL MATERIALITY

We have a unique opportunity to drive the transition to low-carbon technologies, boosting brand equity and revenue. By focusing on renewable energy, market



Corporate and sustainability governance

expansion and new product development, we can enhance ABB’s reputation, attract investors and capture new revenue streams. However, risks such as non-compliance with possible climate regulations, reputation damage and market challenges need to be managed. We must mitigate climate risks, manage emissions, invest in low-carbon technologies and ensure regulatory compliance to maintain competitiveness and seize new opportunities.

**PRINCIPAL RISK: REFER TO TCFD REPORT**

Risk description	Example of risk responses	Effectiveness of the risk response
Refer to TCFD Report	Refer to TCFD Report	Climate targets (Sustainability Report 2023: Low-carbon society).

**TOPIC DESCRIPTION**

This topic refers to ABB’s ethical business practices, corporate compliance and systematic risk management, including environmental, social and legal risks. Ethical business behavior, good governance as well as transparency and integrity ensure a strict commitment to anti-corruption, fair competition and compliance with legal obligations within ABB and towards customers and suppliers. Another important component is the regular review of the relevant processes as well as thorough due diligence. This topic also includes the disclosure of our tax practice and corresponding payments as well as the design of responsible and fair remuneration practices. In addition, it addresses our sustainability governance structure, which ensures that sustainability is given appropriate consideration at all levels, from the Board of Directors to the operating departments.

**IMPACT MATERIALITY**

Through ABB’s values and zero-tolerance policy towards bribery, corruption and other inappropriate business behavior, we can prevent negative socioeconomic and environmental impacts of such activities, bring about a change in business ethics both upstream and downstream and raise standards in the industry. If we do not adhere to ethical principles, we could not only harm our own business but also our stakeholders by damaging our reputation or losing the right to operate in certain markets. This would result in negative social and economic impacts on ABB employees, local communities and our suppliers.

**FINANCIAL MATERIALITY**

Ethical business practices foster trust in ABB among customers, investors and other stakeholders, which help us to be perceived as a reliable, sustainable and trustworthy business partner. This trust in the company’s integrity can translate into long-term business relationships and increased revenues for ABB while at the same time having a positive impact on the environment and society. Unethical conduct and non-compliance with applicable laws can lead to fines, damage to our reputation and legal and financial consequences. Failure to manage risk systematically can lead to financial turmoil and reputational damage, undermining long-term sustainability and shareholder confidence.

**PRINCIPAL RISK: INTEGRITY BREACHES**

Risk description	Example of risk responses	Effectiveness of the risk response
Failure to act with integrity and meet our high ethical standards in line with our purpose, values and code of conduct leading to adverse reputational impact, fines and litigations.	<ul style="list-style-type: none"> <li>• Zero tolerance policy towards bribery, corruption and inappropriate business behavior.</li> <li>• Company-wide Code of Conduct policy and associated training.</li> <li>• Compliance monitoring program and controls.</li> </ul>	Integrity targets (Sustainability Report 2023: Integrity and transparency).

## Data privacy and cyber security

### TOPIC DESCRIPTION

This refers to ABB's preventive measures in data security and privacy, cyber security and compliance with applicable data privacy laws, such as GDPR. We ensure the protection of customer, employee and other individual privacy and personal data, implementing robust measures to protect their rights and safeguard against cyber threats. Our commitment to data security and privacy underscores our determination to maintain compliance, earn the trust of customers and stakeholders, and comply with existing and upcoming laws and regulations. More information can be found at our external data privacy portal <https://new.abb.com/privacy>.

### IMPACT MATERIALITY

ABB has a positive impact on data security and cyber security by proactively managing risks and increasing awareness. We deliver secure solutions to customers and protect their data. We also recognize that there are risks resulting from cyber incidents, such as data breaches, which can result in negative impacts on individuals' right to privacy. We work to implement safeguards to protect personal and business data and strive to be a role model in data privacy. We aim to minimize negative impacts and contribute to a safer digital environment.

### FINANCIAL MATERIALITY

ABB has opportunities to gain operational efficiencies, competitive advantage and stakeholder trust by enhancing technology and being recognized as a trustworthy market player. Leveraging our focus on privacy and security can provide customers with products and services that mitigate relevant risks and meet their expectations. Risks to ABB's business include data and cyber security breaches and the subsequent risk of personal data or business data being disclosed and/or misused, which can result in fines, operational disruptions, reputational damage and loss of stakeholder trust. Protecting personal and business data is crucial to retaining the trust of stakeholders and avoiding negative financial impacts.

### PRINCIPAL RISK: CYBER SECURITY INCIDENTS

Risk description	Example of risk responses	Effectiveness of the risk response
Potential cyber incidents involving ABB or third parties due to a global increase in sophisticated cyber attacks, high interconnectivity & cyber dependency across the supply chain and increasing process digitalization combined with a complex IS landscape.	<ul style="list-style-type: none"> <li>Cyber security assessments &amp; findings remediations and tools to identify and prevent cyber attacks.</li> <li>Onboarding of IT assets to global security solutions &amp; business continuity and disaster recovery planning.</li> </ul>	Cyber security targets (Sustainability Report 2023: Data privacy and cyber security).

## Employee development and wellbeing

### TOPIC DESCRIPTION

This topic refers to being an employer of choice by actively seeking to attract new employees and retain current ones. We actively support not only professional development, career opportunities and growth by offering training, but also encourage the personal growth of our employees through specific initiatives to ensure the right balance between employees' professional and personal lives. In doing so, we support the wellbeing and mental health of our employees around the world. This topic also covers changes in the labor market, the mix of occupations and workforce skills that will be needed for jobs in the future.

### IMPACT MATERIALITY

By recruiting and developing talent, ABB can have a positive impact on employee satisfaction, work-life balance and performance. Thus, we can contribute to an inclusive culture in the communities in which we operate, as well as in society overall. Ensuring the wellbeing of our (future) employees can positively impact equal growth and development opportunities. Furthermore, digitalization and automatization of labor can positively impact society by enabling more equal access of learning and employment opportunities. If we did not engage in people management and ensure employee wellbeing, this could have negative impacts on the (mental) health, motivation and

learning potential of our employees, with a commensurate negative effect on customer satisfaction and equality of opportunity in the communities in which we operate. Digitalization and automation of labor can potentially result in local job losses with negative economic impacts on individuals and communities.

**FINANCIAL MATERIALITY**

By attracting new talents and supporting the development, health and wellbeing of our employees, we can ensure that ABB has the human capital to develop more resource-efficient and sustainable products. This in turn can lead to higher employee engagement with positive impacts on ABB’s long-term business success. Additionally, digitalization and automatization of labor could positively impact our business resilience as we adapt to new trends and increase the technological knowledge of our employees. Neglecting development and wellbeing could have negative impacts on ABB’s brand reputation and would put the company at risk of losing talent, knowledge and thereby competitive advantage.

**PRINCIPAL RISK: LACK OF QUALIFIED/AVAILABLE HUMAN RESOURCES**

Risk description	Example of risk responses	Effectiveness of the risk response
Potential shortage of the right skilled resources or inability to retain those skilled resources due to fierce global market competition for talent, aging workforces, technical expertise erosion and fast-changing skill sets.	<ul style="list-style-type: none"> <li>Agile manpower planning with the use of talent agencies and external service providers.</li> <li>Development of people strategies, early talent programs and recognition of key individuals.</li> </ul>	Employee engagement score and Net Promoter Score (Sustainability Report 2023: Social progress, Employee engagement score, People development, Employee wellbeing).

**Health and safety**

**TOPIC DESCRIPTION**

This topic addresses the importance of health and safety measures in the workplace, recognizing that having a safe place to work is a fundamental human right. It refers to our efforts to ensure the health and safety of employees, contractors and supply-chain partners by implementing standards and procedures to promote a safe work environment and comply with local laws and regulations. It also involves developing safe products, solutions and services through safety testing and implementing safety features in products and services to prevent accidents and injuries.

**IMPACT MATERIALITY**

Health and safety measures can help prevent workplace injuries and illnesses, leading to safer, more productive and sustainable working environments for our employees, contractors and supply-chain partners. By prioritizing health and safety, we can create a culture of safety in our own operations and throughout our supply chain. This can lead to higher employee engagement and productivity, as well as lower absenteeism and turnover rates. Neglecting health and safety measures in the workplace or in our products can result in injuries and illnesses, which can also have negative economic impacts for people and communities.

**FINANCIAL MATERIALITY**

Safe and healthy working conditions for employees are the basis of functioning business operations. Effective health and safety measures can increase employee engagement and raise our profile as an attractive employer. By focusing on developing safe products, solutions and services, we can differentiate ABB from competitors and improve our value proposition to customers. This can lead to long-term sustainable growth for the company. Conversely, neglecting health and safety can lead to penalties, fines and claims for compensation, negatively impacting the company’s financial performance and reputation.



## Human rights and labor standards

### PRINCIPAL RISK: OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT

Risk description	Example of risk responses	Effectiveness of the risk response
Failure to manage health and safety across operations and locations resulting in workplace accidents, injuries or occupational illnesses leading to human suffering, compensation costs, legal liabilities and reputational damage.	<ul style="list-style-type: none"> <li>• Health and Safety policies and company-wide Code of Conduct policy.</li> <li>• Company-wide Health and Safety Management system.</li> <li>• Ongoing monitoring and reporting of key Health and Safety compliance metrics.</li> <li>• Independent Health and Safety audits.</li> </ul>	Health and safety targets (Sustainability Report 2023: Social progress, Health and safety).

### TOPIC DESCRIPTION

This topic refers to ABB's commitment to comply with internationally recognized standards, laws and regulations. This includes the elimination of child and forced labor, and the right to work under fair and safe conditions, including access to fair wages and the right to freedom of association and collective bargaining. It also includes respecting the rights of communities and individuals when providing security for our people and assets, as well as recognizing and respecting communities' land rights. We also recognize that we have a responsibility to respect and promote human and labor rights along our value chain. This includes conducting proper due diligence on our suppliers and contractors to ensure they meet our standards for environment, health and safety, as well as human rights and labor standards.

### IMPACT MATERIALITY

Promoting and respecting human rights and labor standards can have a positive impact on communities and society as a whole. By creating and maintaining safe and fair working conditions, we can help to improve the wellbeing and quality of life for our employees, as well as those of our contractors and supply-chain partners. By ensuring that all employees and stakeholders are treated fairly, we can also help to create a more equitable society and a stable economy. Not respecting human rights and labor standards can potentially result in negative impacts on people and communities. Negative impacts can include injuries or illnesses in workplaces, inadequate standards of living for workers due to poor wages, denial of workers' rights to leave their employers and employment of children, thus depriving them of their childhood and education. Not recognizing communities' land rights can result in negative economic or cultural impacts on those communities and not respecting human rights in providing security can escalate conflicts, potentially resulting physical and economic harm to people and communities.

### FINANCIAL MATERIALITY

Respect for human rights and labor standards is a fundamental requirement for our contractors, suppliers and other business partners. By promoting human rights and labor standards, we can enhance ABB's reputation as a responsible business partner, attract and retain top talent, and foster a positive work environment. Furthermore, ensuring compliance with these standards can also help mitigate risks associated with legal and reputational harm.

### PRINCIPAL RISK: INTEGRITY BREACHES

Risk description	Example of risk responses	Effectiveness of the risk response
Failure to act with integrity and meet our high ethical standards in line with our purpose, values and code of conduct leading to adverse reputational impact, fines and litigations.	<ul style="list-style-type: none"> <li>• Dedicated Supplier Code of Conduct policy</li> <li>• Due diligence processes in all our business relationships.</li> <li>• Company-wide Code of Conduct policy</li> </ul>	Human Rights targets (Sustainability Report 2023: Social Progress, Human rights and labor standards).

**Products, solutions and services**

**TOPIC DESCRIPTION**

This topic refers to ABB’s ability to provide a diverse range of products, solutions and services that meet customer needs, with a focus on quality, safety and eco-efficiency. We are also committed to investing in responsible and innovative product development, including the careful consideration of AI and cooperations with start-ups, as well as leveraging digital technologies and sustainable raw materials to meet current and future customer demands.

**IMPACT MATERIALITY**

Our existing products, solutions and services, as well as our investments in responsible and innovative technologies and digitalization, can increase our customers’ efficiency and productivity and improve safety conditions for their workers. Sustainable products, solutions and services can also positively impact the environment by increasing energy and resource efficiency, leading to a reduction in greenhouse gas emissions. Potential negative impacts of the implementation of innovative technologies and digitalization can be local job losses with consequent impacts on communities, lack of access to affordable technologies resulting in further economic disadvantage for certain communities.

**FINANCIAL MATERIALITY**

By providing high-quality products, solutions and services, we enhance customer satisfaction and strengthen ABB’s market position. By investing in research and development as well as in cooperations with innovative start-ups regarding AI solutions, we can offer innovative products and services that help us maintain a competitive advantage, attract and retain customers and improve sustainability. This can lead to increased revenue and profitability, as well as improved brand recognition and reputation.

**PRINCIPAL RISK: GEOPOLITICAL INSTABILITY**

Risk description	Example of risk responses	Effectiveness of the risk response
Increased geopolitical tensions resulting in global targeted technology decoupling, protectionism, trade restrictions, “friendshoring,” new regulations and employee security implications.	<ul style="list-style-type: none"> <li>Evaluation and quantification of exposure to and dependency on leading geographical markets.</li> <li>Design of a balanced supplier base across geographies and further shift to local supplier strategy.</li> </ul>	The effectiveness of these measures is considered as part of the annual strategy refresh process, where mitigation actions are reflected in the strategic decisions.

**Responsible sourcing**

**TOPIC DESCRIPTION**

This refers to the sustainable and responsible sourcing of materials, products and services. It covers the social and environmental performance of suppliers and their adherence to ABB’s requirements regarding material compliance and conflict minerals. In order to ensure sustainable sourcing, ABB has a Supplier Code of Conduct, which is based on relevant international frameworks, standards and legislation governing ethical and sustainable business practices. It complements the company’s internal Code of Conduct, which is binding for all employees. Additionally, we are referring to our efforts to optimize logistics and transportation regarding, e.g. the packaging of our products.

**IMPACT MATERIALITY**

By actively and responsibly managing our supply chain, we can have a positive impact on local economies, the environment and people, including human rights. Additionally, we aim to set a positive example to our suppliers via our efforts to source minerals responsibly and to avoid using hazardous substances in our own operations. Furthermore, minimizing logistics can positively impact the environment by reducing emissions. Not applying standards in our supply chain can have negative impacts on the environment, people and communities. Negative impacts can include injuries or illnesses in supplier workplaces, inadequate standards of living for workers due to

poor wages, denial of workers’ rights to leave their employers and the employment of children, thus depriving them of their childhood and education.

**FINANCIAL MATERIALITY**

Sustainable sourcing can make ABB’s supply chain more resilient, which in turn would support our business stability, growth and future success of ABB. This would also mitigate the negative impacts of reputational loss or a loss of business opportunities. Finally, optimized logistics can lead to cost savings and improved quality.

**PRINCIPAL RISK: AVAILABILITY OF COMPONENTS AND RAW MATERIALS**

Risk description	Example of risk responses	Effectiveness of the risk response
Possible shortages of components and raw materials due to high dependency on few suppliers, supply chain shortages or inability to adapt or comply with changes in import regulations.	<ul style="list-style-type: none"> <li>• Development of alternative materials with the support of R&amp;D</li> <li>• Extensive activity to minimize single source components."</li> </ul>	Responsible sourcing targets (Sustainability Report 2023: Integrity and transparency, Responsible sourcing).



# Non-material topic descriptions

## Biodiversity and land use

### TOPIC DESCRIPTION

Biodiversity refers to the protection of biological and genetic diversity in the natural world. Protecting this diversity is critical to ensuring the survival of plant and animal species and the preservation of natural ecosystems. Land use refers to ABB's work to remediate contaminated soil and water at legacy sites, as well as to its work to protect biodiversity by minimizing land use and reducing or avoiding deforestation.

### IMPACT MATERIALITY

With proper biodiversity and land-use management, ABB can have a positive impact on the environment by protecting flora and fauna and implementing legacy site remediation projects. The use of flora/fauna assessments and smart design would enable our operations to avoid harm to the environment. However, improper management could have significant impacts in the form of noise, air, soil or water pollution, as well as potential social and economic impacts on affected communities.

### FINANCIAL MATERIALITY

In cases where not enough attention is paid to biodiversity protection and responsible land use, the outcome could result in negative media coverage, leading to reputational damage and even fines which could harm our business in the long run.

## Diversity and inclusion

### TOPIC DESCRIPTION

This refers to embracing a diverse workforce across all dimensions (e.g., gender, age, ethnicity, abilities, sexual orientation, etc.). It also refers to ensuring equal opportunities and equal treatment at the workplace by providing an inclusive environment that welcomes and respects every individual. This enables a healthy and balanced work environment with employees who can bring their full selves to work and have a strong sense of belonging.

### IMPACT MATERIALITY

ABB's focus on diversity and inclusion (D&I) has a positive impact on society by promoting systemic changes, fostering diverse leadership and improving working conditions and employment access for all. Our commitment to D&I creates better working environments, benefits families and communities, and sets an example for other companies. With our local presence and approach, we bring career opportunities to local communities, contributing to social progress and equal opportunities. Lack of inclusion and violations of human rights can negatively impact the wellbeing of individuals and hinder societal progress in ABB's operating locations.

### FINANCIAL MATERIALITY

We have the opportunity to enhance workforce diversity, attract top talent and drive innovation, leading to improved reputation, customer relationships and overall business performance. Embracing diversity of thought enables better decision-making and access to a wider range of ideas. However, neglecting diversity and inclusion policies can lead to risks such as reputational damage, talent loss, missed growth opportunities and poorer business decisions due to a lack of diverse perspectives. Non-compliance with regulations and insufficient gender diversity in leadership can also hinder our business success.

## Partnerships and collaboration

### TOPIC DESCRIPTION

This refers to ABB's engagement, interaction, partnerships and co-development of solutions with its most relevant stakeholder groups, including: employees, customers, suppliers, investors, governments and civil society. We actively engage with governments and local communities in which our products are manufactured and used with the aim of remediating impacts and fostering technology adoption, sound regulatory frameworks, job creation and economic growth. Our community engagement encompasses partnerships, projects, advocacy and philanthropic initiatives addressing areas such as climate change, biodiversity conservation, education to foster employability and digitalization readiness, diversity and poverty alleviation, and disaster and emergency relief. Our support to communities includes in-kind and financial donations, as well as corporate volunteering. We maintain open, trustworthy and transparent communication and cooperation with all our stakeholders.

### IMPACT MATERIALITY

By engaging with stakeholders, we can create value for them and strengthen our relationships. We can use these partnerships through a multiplier effect to positively impact not only our direct stakeholders but also the supply chain beyond. This also holds true for our social activities such as our support for equal access to education or contributions to research programs, through which we can have positive impacts on society. Not engaging with our stakeholders could result in projects or programs that have unintended negative social or economic impacts on individuals or local communities due to lack of understanding of local needs or sensitivities.

### FINANCIAL MATERIALITY

Through frequent and effective stakeholder engagement, we can maintain ABB's reputation, consolidate its license to operate and ensure its long-term business success. Close stakeholder cooperation and community engagement initiatives oriented toward impact management and development opportunities can also benefit society, help the environment, support sustainable growth and encourage new revenue streams. An increase in partnerships can lead to new sustainable business models in the industry. Community engagement can attract investors and talent, enhance employee engagement, reinforce company values, build trust and foster cross-societal relationships. If we were not to engage with our stakeholders, this could have a negative impact on our reputation and on the company, e.g., through litigation or boycotts by civil society, or our investors could decide to invest elsewhere.

## Water and waste management

### TOPIC DESCRIPTION

This refers to ABB's water usage as well as its sustainable and proper management of water, which is a dwindling resource in many countries. Even though we use relatively little water in our production processes, proper water management as well as recycling and the reduction of waste generation in our own operations as well as during production processes are priorities for ABB. This also includes our efforts to reuse materials.

### IMPACT MATERIALITY

Proper (waste) water and waste management can minimize the impact of our operations on the environment. By managing water sustainably, we can contribute to protecting scarce resources, even though our production processes use relatively little water. Additionally, we can reduce or eliminate the pollution of soil, water and air as well as the amount of waste we send to landfill. By acting as a role model with regard to waste management, we can contribute to an improved circular economy and encourage stakeholders follow suit, thereby increasing our positive impact in our supply chain. Improper water management can lead to increased soil, water and air pollution as well as wasting of scarce resources, which can have negative impacts on the health and livelihoods of people and communities.

### FINANCIAL MATERIALITY

Sustainable water management and reuse as well as the recycling of waste can reduce costs for ABB. This helps to ensure business continuity and improves our reputation. If we did not engage in recycling, we would likely have higher manufacturing costs, which would negatively impact our business. Additionally, if water and waste are not managed properly, it could have a negative impact on our reputation and lead to fines.

# GRI disclosures table

## Environmental

GRI ref.	Indicator description	Limited assurance 2023	2023	2022
301-1	<b>MATERIALS USED BY WEIGHT OR VOLUME (KILOTONS)<sup>1</sup></b>			
	Metals	●	1,168	1,190
	Copper		84	93
	Aluminum		83	82
	Steel (incl. iron casting)		1,000	1,015
	Plastics		136	173
302-1	<b>ENERGY CONSUMPTION WITHIN THE ORGANIZATION (GIGAWATT-HOURS – GWH)<sup>3</sup></b>			
	Biofuels		3.1	2.03
	Oil (11.63 MWh/ton)		7.4	7.1
	Diesel (11.75 MWh/ton)		3.9	4.6
	Coal (7.56 MWh/ton)		0	0
	Gas		332	388
	District heat consumption		101	107
	Electricity consumption		850	909
	<b>Total energy used</b>	●	<b>1,298</b>	<b>1,413</b>
	Electricity sold		3.2	1.7
	<b>Total energy consumption within the organization from renewable sources</b>	●	<b>830</b>	<b>741</b>
	<b>Total energy consumption within the organization from non-renewable sources</b>	●	<b>467</b>	<b>676</b>
302-3	<b>ENERGY INTENSITY (MWH/REVENUE \$)<sup>4</sup></b>	●	40	48
	<b>GREENHOUSE GAS (GHG) EMISSIONS<sup>5</sup> (KILOTONS CO<sub>2</sub>E)</b>			
305-1	<b>DIRECT (SCOPE 1) GHG EMISSIONS<sup>6</sup></b>			
	Use of fuels		70	81
	Coolants		4.3	5.1
	SF <sub>6</sub> <sup>7</sup>		9	20
	Transport by own fleet		44	48
	<b>Total scope 1 GHG emissions</b>	●	<b>128</b>	<b>155</b>
	<b>OTHER</b>			
	Biogenic CO <sub>2</sub> emissions <sup>8</sup>		0.86	0.72



GRI ref.	Indicator description	Limited assurance 2023	2023	2022
305-2	<b>ENERGY INDIRECT (SCOPE 2) GHG EMISSIONS<sup>6</sup></b>			
	District heat consumption		10	15
	Electricity consumption		13	52
	<b>Total scope 2 GHG emissions</b>	●	<b>23</b>	<b>66</b>
	<b>Total scope 1 and 2 GHG emissions<sup>9</sup></b>	●	<b>151</b>	<b>221</b>
305-3	<b>OTHER INDIRECT (SCOPE 3) GHG EMISSIONS<sup>6</sup></b>			
	Purchased goods and services <sup>10</sup>		16,485	16,068
	Capital goods		94	90
	Fuel and energy-related activities		65	75
	Upstream transportation and distribution		699	584
	Waste generated in operations		15	16
	Business travel <sup>11</sup>		154	82
	Employee commuting		175	190
	Upstream leased assets		n.a.	n.a.
	Downstream transportation and distribution		62	52
	Processing of sold products		0	0
	Use of sold products - Energy loss		58,638	59,405
	Use of sold products - Energy input		418,318	374,759
	End-of-life treatment of sold products		264	263
	Downstream leased assets		3	1
	Franchises		n.a.	n.a.
	Investments		11	10
	<b>Total scope 3 GHG emissions<sup>9</sup> (representative<sup>12</sup>/ strict<sup>13</sup>)</b>	● <sup>2</sup>	<b>76,665<sup>12</sup> / 436,346<sup>13</sup></b>	<b>76,834<sup>12</sup> / 392,188<sup>13</sup></b>
305-4	<b>GHG EMISSIONS INTENSITY (TONS CO<sub>2</sub>E/MILLION \$)</b>			
	Tons CO <sub>2</sub> equivalent per million \$ sales, Scope 1+2	●	4.7	7.6
	Tons CO <sub>2</sub> equivalent per million \$ sales, Scope 1+2+3 (representative <sup>12</sup> )	●	2,617	2,383
	Tons CO <sub>2</sub> equivalent per million \$ sales, Scope 1+2+3 (strict <sup>13</sup> )	●	13,541	13,326
305-7	<b>NITROGEN OXIDES (NO<sub>x</sub>), SULFUR OXIDES (SO<sub>x</sub>), AND OTHER SIGNIFICANT AIR EMISSIONS (TONS)</b>			
	Volatile organic compounds (VOC)		421	481
	Emissions of NO <sub>x</sub> and SO <sub>x</sub> (tons SO <sub>2</sub> and NO <sub>2</sub> )			
	SO <sub>x</sub> from burning coal		0	0
	SO <sub>x</sub> from burning oil and biofuels		9.3	10
	NO <sub>x</sub> from burning coal		0	0
	NO <sub>x</sub> from burning oil and biofuels		7	7
	NO <sub>x</sub> from burning gas		72	84
306-3 (2016)	<b>SIGNIFICANT SPILLS (TOTAL NUMBER)<sup>14</sup></b>			
	Oil spills		1	2
	Chemical spills		0	0
	Emissions to air		0	1
	Others		0	0
	<b>Total number of significant spills</b>		<b>1</b>	<b>3</b>

## Social

GRI ref.	Indicator description	Limited assurance 2023	2023	2022
2-7	<b>NUMBER OF EMPLOYEES (REFLECTED IN HEADCOUNT)<sup>1,5</sup></b>			
	<b>TOTAL NUMBER OF EMPLOYEES BY REGION</b>			
	Europe		52,723	51,360
	The Americas		26,437	25,950
	Asia, Middle East and Africa		31,282	29,540
	<b>TOTAL NUMBER OF EMPLOYEES BY GENDER</b>			
	Female		30,644	29,900
	Male		79,798	76,950
	<b>Total number of employees</b>		<b>110,442</b>	<b>106,850</b>
	<b>NUMBER OF PERMANENT EMPLOYEES</b>			
	<b>TOTAL NUMBER OF PERMANENT EMPLOYEES BY REGION<sup>1,6</sup></b>			
	Europe		48,224	n.a.
	The Americas		26,184	n.a.
	Asia, Middle East and Africa		29,618	n.a.
	<b>TOTAL NUMBER OF PERMANENT EMPLOYEES BY GENDER<sup>1,6</sup></b>			
	Female		28,825	n.a.
	Male		75,201	n.a.
	<b>Total number of permanent employees</b>		<b>104,026</b>	<b>n.a.</b>
	<b>NUMBER OF TEMPORARY EMPLOYEES</b>			
	<b>TOTAL NUMBER OF TEMPORARY EMPLOYEES BY REGION<sup>1,6</sup></b>			
	Europe		4,499	n.a.
	The Americas		253	n.a.
	Asia, Middle East and Africa		1,664	n.a.
	<b>TOTAL NUMBER OF TEMPORARY EMPLOYEES BY GENDER<sup>1,6</sup></b>			
	Female		1,819	n.a.
	Male		4,597	n.a.
	<b>Total number of temporary employees</b>		<b>6,416</b>	<b>n.a.</b>
	<b>NUMBER OF FULL-TIME EMPLOYEES</b>			
	<b>TOTAL NUMBER OF FULL-TIME EMPLOYEES BY REGION<sup>1,6</sup></b>			
	Europe		47,837	n.a.
	The Americas		25,858	n.a.
	Asia, Middle East and Africa		31,155	n.a.
	<b>TOTAL NUMBER OF FULL-TIME EMPLOYEES BY GENDER<sup>1,6</sup></b>			
	Female		27,886	n.a.
	Male		76,964	n.a.
	<b>Total number of full-time employees</b>		<b>104,850</b>	<b>n.a.</b>
	<b>NUMBER OF PART-TIME EMPLOYEES</b>			
	<b>TOTAL NUMBER OF PART-TIME EMPLOYEES BY REGION<sup>1,6</sup></b>			
	Europe		4,886	n.a.
	The Americas		579	n.a.
	Asia, Middle East and Africa		127	n.a.
	<b>TOTAL NUMBER OF PART-TIME EMPLOYEES BY GENDER<sup>1,6</sup></b>			
	Female		2,758	n.a.
	Male		2,834	n.a.
	<b>Total number of part-time employees</b>		<b>5,592</b>	<b>n.a.</b>

GRI ref.	Indicator description	Limited assurance 2023	2023	2022
<b>401-1</b>	<b>EMPLOYEE TURNOVER (REFLECTED IN HEADCOUNT)</b>			
	<b>TURNOVER OF ALL EMPLOYEES BY REGION<sup>17</sup></b>			
	Europe		6,852 (13%)	7,032 (14%)
	The Americas		5,107 (19%)	5,726 (22%)
	Asia, Middle East and Africa		4,472 (14%)	4,438 (15%)
	<b>TURNOVER OF ALL EMPLOYEES BY GENDER<sup>17</sup></b>			
	Female		4,817 (16%)	5,375 (18%)
	Male		11,614 (15%)	11,821 (15%)
	<b>Total employee turnover: ABB Group</b>		<b>16,431 (15%)</b>	<b>17,196 (16%)</b>
	<b>EMPLOYEE HIRES (REFLECTED IN HEADCOUNT)</b>			
	<b>EMPLOYEE HIRES BY REGIO</b>			
	Europe		7,909 (15%)	6,068 (12%)
	The Americas		6,543 (25%)	4,466 (17%)
	Asia, Middle East and Africa		5,783 (18%)	5,087 (17%)
	<b>EMPLOYEE HIRES BY GENDER</b>			
	Female		6,047 (20%)	4,983 (17%)
	Male		14,188 (18%)	10,638 (14%)
	<b>Total employee hires: ABB Group</b>		<b>20,235 (18%)</b>	<b>15,621 (15%)</b>
<b>403-9</b>	<b>WORK-RELATED INJURIES</b>			
	Employee work-related fatalities <sup>18,19</sup>		0	0
	Incident rate <sup>19</sup>		0	0
	Employee business travel fatalities <sup>18,21</sup>		0	1
	Incident rate <sup>20</sup>		0	0.001
	Contractor work-related fatalities <sup>19</sup>		1	0
	Contractor business travel fatalities <sup>18,21</sup>		0	0
	Members of the public fatalities <sup>18</sup>		0	0
	Employee total recordable incident number <sup>19,20</sup>		312	358
	Injury rate <sup>20</sup>		0.27	0.31
	Contractor total recordable incident number <sup>19,22</sup>		63	73
	Injury rate <sup>20</sup>		0.31	0.41
	Employee lost time incident number <sup>19</sup>		142	165
	Injury rate <sup>20</sup>		0.12	0.14
	Contractor lost time incident number <sup>19</sup>		32	30
	Injury rate <sup>20</sup>		0.16	0.17
	Combined lost time incident number		174	182
	Combined lost time injury rate		0.13	0.14
	Employee lost days due to industrial incidents <sup>23</sup>		2,503	2,981
	Days lost rate <sup>20</sup>		2.2	2.6
	Employee occupational health illnesses <sup>19</sup>		7	11
	Employee occupational health illness rate <sup>19,20</sup>		0.01	0.01
	Sustainability Observation Tours (SOT) conducted <sup>24</sup>		69,131	65,687
	SOT rate <sup>24,25</sup>		5.34	5.28
	Hazards reported <sup>19</sup>		256,513	250,741
	Hazards reporting rate <sup>26</sup>		2.23	2.18
<b>404-1</b>	<b>AVERAGE HOURS OF TRAINING PER YEAR PER EMPLOYEE</b>			
	<b>TRAINING PER YEAR PER EMPLOYEE (AVERAGE HOURS) BY EMPLOYEE CATEGORY<sup>27,28,29</sup></b>			
	Top and senior managers		11.2	4.7
	Middle and lower managers		15.1	8.6
	Other employees		5.7	4
	<b>TRAINING PER YEAR PER EMPLOYEE (AVERAGE HOURS) BY GENDER<sup>27</sup></b>			
	Female		6	4
	Male		7	4
	<b>Total workforce</b>		<b>6.8</b>	<b>4.5</b>



GRI ref.	Indicator description	Limited assurance 2023	2023	2022
<b>404-3</b>	<b>PERCENTAGE OF EMPLOYEES RECEIVING REGULAR PERFORMANCE AND CAREER DEVELOPMENT REVIEWS<sup>2,6,30</sup></b>			
	<b>PERCENTAGE OF EMPLOYEES RECEIVING REGULAR PERFORMANCE AND CAREER DEVELOPMENT REVIEWS BY EMPLOYEE CATEGORY</b>			
	Top and senior managers		100%	98%
	Middle and lower managers		99%	95%
	Other employees		98%	85%
	<b>PERCENTAGE OF EMPLOYEES RECEIVING REGULAR PERFORMANCE AND CAREER DEVELOPMENT REVIEWS BY GENDER<sup>1,6</sup></b>			
	Female		64%	n.a.
	Male		69%	n.a.
	<b>Total workforce</b>		<b>68%</b>	<b>92%</b>
<b>406-1</b>	<b>INCIDENTS OF DISCRIMINATION AND CORRECTIVE ACTIONS TAKEN<sup>31</sup></b>			
	Total number of incidents of discrimination		17	10
	Total number of incidents of harassment		72	64
<b>415-1</b>	<b>POLITICAL CONTRIBUTIONS</b>			
	Financial and in-kind political contributions		0	0

**Note:** Due to rounding, numbers presented in the GRI table may not add to the totals provided.

- 1 Estimated with calculation model based on \$ spend. Numbers include materials sourced both as raw material and part of components.
- 2 Limited assurance extends to 2022 amounts, see limited assurance report (contained in this report) for details.
- 3 The energy use of our fleet of leased vehicles is not included in these data.
- 4 Includes all types of energy used within the organization, except the energy use of our fleet of leased vehicles.
- 5 See "Approach to reporting" for more details on GHG emission calculation.
- 6 GHG data for 2022 have been adjusted for portfolio changes.
- 7 In 2019, we updated the factor used to convert SF<sub>6</sub> emissions to CO<sub>2</sub> equivalent to 23,500 kg CO<sub>2</sub>e/kg SF<sub>6</sub>, as recommended by the IPCC 2013 (Fifth Assessment Report).
- 8 In our scope 1, ABB only considers methane and N<sub>2</sub>O emissions of biogenic emissions, following SBTi guidance, amounting to 2 tons of CO<sub>2</sub>e in 2023.
- 9 In 2023, we updated our methodology for determining Scope 1, 2 and 3 SBTi targets, as well as expanding it to incorporate recent business acquisitions, and accordingly have recast prior year information, including the initial 2019 baseline, to conform with the current year's presentation.
- 10 Purchased goods and services emissions cover 100% of procurement spend.
- 11 Includes air travel and rented vehicles.
- 12 Representative scenario: Energy loss used as basis for calculations.
- 13 Strict scenario: Energy input used as basis for calculations.
- 14 An environmental incident is regarded as significant if at least one of the following criteria applies to the incident: obligation to inform local authorities or a governmental agency about the incident and/or regulatory violation; inspection by an environmental agency results in a formal complaint; environmental Notice of Violation, a Consent Order or a Potential Responsible Party (PRP) notification; imposition of a penalty or fine; significant impact on an ecosystem; costs related to the incident exceed, or may exceed, \$10,000.
- 15 This was previously mistakenly displayed as part of GRI 401-1, hence this new 2-7 section this year.
- 16 As we are disclosing these KPIs for the first time this year, there is no value available for year 2022.
- 17 Turnover rate calculated as number of ABB employees (full- and part-time) leaving during the year/total number of ABB employees (full- and part-time) as at December 31. For the purpose of this calculation, employees who leave the organization voluntarily or involuntarily whether due to dismissal, retirement, end of fixed-term contract or death in service or any other reason, are included. However, involuntary turnover arising out of divestments is excluded from the definition.
- 18 Fatalities include deaths occurring within one year as a result of injuries sustained and commuting is excluded.
- 19 Data covers incidents that happened at the workplace (ABB facility, customer site, project site) and excludes incidents that occurred during business travel.
- 20 Rates are per 100 employees or per 200,000 contractor hours worked. Employees in the rates are defined as persons who are permanent or temporary employees, working full time or part time, in the employment of an ABB Group Company (ABBGC). Persons hired via work agencies where ABB provides supervision, defines work to be done, and provides training are also included in this category.
- 21 Includes incidents during business travel by road. Air and rail travels are excluded.
- 22 Recordable incidents include fatal incidents, lost time incidents, serious injury incidents, medical treatment injuries, occupational diseases and restricted work-day cases.
- 23 Days lost are calendar days and are counted from the day after the incident.
- 24 SOTs are typically conducted by all line managers at all levels.
- 25 Rate per manager.
- 26 Rate is calculated per employee.
- 27 Scope includes centrally managed tools such as My learning, Harvard Spark, Harvard Manager Mentor, LinkedIn Learning. It covers both leadership and functional/technical learnings. Data are based on the extractions from the respective tools for internal employees (office workers and factory ones).
- 28 Top and senior managers are defined as employees in Hay grade 1-7, including Division President. Middle and lower managers: Other line managers; Other employees: Individual contributors not considered as managers.
- 29 Learning hours reported in 2022 were affected by a an error in the data extracted from the LinkedIn learning platform. The error in the dashboard calculation was spotted during 2023, when comparing this year's data with last year's data and while analyzing the delta between the two years. It generated an overestimation of hours from the LinkedIn learning platform, which has been now corrected. The restated data are now corrected and shown in the table below (or above based on the graphics).
- 30 The calculation of performance review data is based on the population that is included in the global people performance management system (HR Group Tools). 100% of top and senior managers and of middle and low managers are covered in the HR Group Tools system and 66% of other employees. This is the only centralized reporting of performance management data that can be quantified and verified and is deemed the 'eligible population'.
- 31 According to our case categorization structure in place for 2023, data presented relates to number of cases logged in Integrity case management system with an issue subcategory of "Discrimination", "Sexual Harassment" or "Harassment/Bullying".

# GRI content index

**Statement of use:** ABB Ltd has reported in accordance with the GRI Standards for the period from 1 January 2023 to 31 December 2023.

**GRI 1 used:** GRI 1: Foundation 2021

**Applicable GRI Sector Standard(s):** Not applicable

Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
<b>GENERAL DISCLOSURES</b>				
2-1	Organizational details	<ul style="list-style-type: none"> <li>a. Financial Report 2023: History of ABB Group</li> <li>b. Financial Report 2023: History of ABB Group</li> <li>c. Financial Report 2023: Organizational Structure</li> <li>d. Form 20-F: Exhibit 8.1</li> </ul>		
2-2	Entities included in the organization's sustainability reporting	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Appendix, Approach to reporting</li> </ul>		
2-3	Reporting period, frequency and contact point	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Appendix, Approach to reporting</li> </ul>		
2-4	Restatements of information	Where necessary, adjustments are described as footnotes to the relevant indicators.		
2-5	External assurance	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Appendix, Assurance Statement</li> </ul>		
2-6	Activities, value chain and other business relationships	<ul style="list-style-type: none"> <li>• Financial Report 2023: Businesses, Our Markets</li> <li>• Financial Report 2023: Businesses (By Business Area)</li> <li>• Financial Report 2023: Businesses, Suppliers and raw materials</li> <li>• Financial Report 2023: Organizational Structure / Note 4 - Acquisitions, divestments and equity-accounted companies / Note 15 - Commitments and contingencies (Related party transactions)</li> <li>• Integrated Report 2023: Value creation</li> <li>• Sustainability Report 2023: Appendix, Approach to reporting, Changes in 2023</li> </ul>		
2-7	Employees	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Appendix, GRI Disclosures table</li> </ul>	b. report the total number of: iii. non-guaranteed hours employees, and a breakdown by gender and by region;	Information unavailable/incomplete  Every country has its own definition of non-guaranteed hours employees, this data is therefore not collected at the global level for now.

Disclosure	Location	ABB omission statements			
		Requirement(s) omitted	Reason	Explanation	
2-8	Workers who are not employees		a. report the total number of workers who are not employees and whose work is controlled by the organization and describe: <ul style="list-style-type: none"> <li>i. the most common types of worker and their contractual relationship with the organization;</li> <li>ii. the type of work they perform;</li> </ul> b. describe the methodologies and assumptions used to compile the data, including whether the number of workers who are not employees is reported: <ul style="list-style-type: none"> <li>i. in head count, full-time equivalent (FTE), or using another methodology;</li> <li>ii. at the end of the reporting period, as an average across the reporting period, or using another methodology;</li> </ul> c. describe significant fluctuations in the number of workers who are not employees during the reporting period and between reporting periods.	Information unavailable/incomplete	We are not collecting this information at a global level, this is managed at a local level.
2-9	Governance structure and composition	<ul style="list-style-type: none"> <li>• Corporate Governance Report 2023</li> </ul>	vi. underrepresented social groups	Information unavailable/incomplete	
2-10	Nomination and selection of the highest governance body	<ul style="list-style-type: none"> <li>• Corporate Governance Report 2023</li> <li>• ABB Ltd Board Governance Rules</li> </ul>			
2-11	Chair of the highest governance body	<ul style="list-style-type: none"> <li>• Corporate Governance Report 2023</li> </ul>	b. if the chair is also a senior executive, explain their function within the organization's management, the reasons for this arrangement, and how conflicts of interest are prevented and mitigated.	Not applicable	The chair of the highest governance body is non-executive and independent.
2-12	Role of the highest governance body in overseeing the management of impacts	<ul style="list-style-type: none"> <li>a. Corporate Governance Report 2023</li> <li>ABB Ltd Board Governance Rules</li> <li>b. Sustainability Report 2023: Sustainability at ABB, Sustainability governance</li> <li>c. Sustainability Report 2023: Sustainability at ABB, Sustainability governance</li> </ul>			
2-13	Delegation of responsibility for managing impacts	<ul style="list-style-type: none"> <li>• Corporate Governance Report 2023</li> <li>• ABB Ltd Board Governance Rules</li> <li>• Sustainability Report 2023: Sustainability at ABB, Sustainability governance</li> </ul>			
2-14	Role of the highest governance body in sustainability reporting	ABB Ltd Board Governance Rules define review and approval competences for ABB's reporting; Board is in charge			
2-15	Conflicts of interest	<ul style="list-style-type: none"> <li>a. ABB Ltd Board Governance Rules (incl. ABB Ltd's Related Party Transaction Policy)</li> <li>b. Corporate Governance Report 2023</li> </ul>			
2-16	Communication of critical concerns	<ul style="list-style-type: none"> <li>• ABB Ltd Board Governance Rules</li> <li>• Corporate Governance Report 2023</li> </ul>	b. report the total number and the nature of critical concerns that were communicated to the highest governance body during the reporting period.	Confidentiality constraints	Due to sensitivity such information cannot be disclosed.
2-17	Collective knowledge of the highest governance body	<ul style="list-style-type: none"> <li>• Corporate Governance Report 2023</li> </ul>			
2-18	Evaluation of the performance of the highest governance body	<ul style="list-style-type: none"> <li>• Corporate Governance Report 2023: Chairman's Letter</li> </ul>			
2-19	Remuneration policies	<ul style="list-style-type: none"> <li>• Compensation Report 2023</li> </ul>			



Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
2-20	Process to determine remuneration	• Compensation Report 2023		
2-21	Annual total compensation ratio	• Compensation Report 2023	b.report the ratio of the percentage increase in annual total compensation for the organization's highest-paid individual to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual)	Information unavailable/incomplete  We didn't calculate the ratio prior to the disclosure in the 2023 report, therefore we can not report on the percentage increase of the ratio. Since the ratio will be calculated and disclosed for the first time this year, we will only be able to disclose the percentage increase of the ratio in the 2024 Compensation Report.
2-22	Statement on sustainable development strategy	• Sustainability Report 2023: Sustainability at ABB, CEO letter		
2-23	Policy commitments	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Integrity and transparency, We embed a culture of integrity and transparency</li> <li>• Sustainability Report 2023: Integrity and transparency</li> <li>• Sustainability Report 2023: Appendix, Approach to reporting</li> <li>• Sustainability Report 2023: Social progress, Human rights and labor standards</li> <li>• Sustainability Report 2023: Social progress, Diversity and inclusion</li> </ul> <p>Group website:</p> <ul style="list-style-type: none"> <li>• <a href="https://global.abb/group/en/about/integrity">https://global.abb/group/en/about/integrity</a></li> <li>• <a href="https://global.abb/group/en/sustainability/social-progress#humanrights">https://global.abb/group/en/sustainability/social-progress#humanrights</a></li> <li>• <a href="https://global.abb/group/en/sustainability/policies--state-ments-and-declarations/human-rights-policy-and-statement">https://global.abb/group/en/sustainability/policies--state-ments-and-declarations/human-rights-policy-and-statement</a></li> <li>• <a href="https://global.abb/group/en/sustainability/policies--state-ments-and-declarations/modern-slavery-and-human-trafficking-statement">https://global.abb/group/en/sustainability/policies--state-ments-and-declarations/modern-slavery-and-human-trafficking-statement</a></li> <li>• <a href="https://global.abb/group/en/about/supplying/code-of-conduct">https://global.abb/group/en/about/supplying/code-of-conduct</a></li> <li>• <a href="https://global.abb/group/en/about/supplying/responsible-minerals">https://global.abb/group/en/about/supplying/responsible-minerals</a></li> <li>• <a href="https://global.abb/group/en/about/supplying/responsible-sourcing">https://global.abb/group/en/about/supplying/responsible-sourcing</a></li> </ul>		

Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
2-24 Embedding policy commitments	<ul style="list-style-type: none"> <li>Sustainability Report 2023: Sustainability at ABB, Sustainability governance</li> <li>Sustainability Report 2023: Integrity and transparency, We embed a culture of integrity and transparency</li> <li>Sustainability Report 2023: Integrity and transparency</li> <li>Sustainability Report 2023: Appendix, Approach to reporting</li> <li>Sustainability Report 2023: Social progress, Human rights and labor standards</li> <li>Sustainability Report 2023: Social progress, Diversity and inclusion</li> <li>Integrated Report 2023</li> </ul> <p>Group website:</p> <ul style="list-style-type: none"> <li><a href="https://global.abb/group/en/about/integrity">https://global.abb/group/en/about/integrity</a></li> <li><a href="https://global.abb/group/en/about/integrity/commitment">https://global.abb/group/en/about/integrity/commitment</a></li> <li><a href="https://global.abb/group/en/about/integrity/training-and-communications">https://global.abb/group/en/about/integrity/training-and-communications</a></li> <li><a href="https://global.abb/group/en/sustainability/policies--statements-and-declarations/human-rights-policy-and-statement">https://global.abb/group/en/sustainability/policies--statements-and-declarations/human-rights-policy-and-statement</a></li> <li><a href="https://global.abb/group/en/sustainability/policies--statements-and-declarations/modern-slavery-and-human-trafficking-statement">https://global.abb/group/en/sustainability/policies--statements-and-declarations/modern-slavery-and-human-trafficking-statement</a></li> <li><a href="https://global.abb/group/en/about/supplying/code-of-conduct">https://global.abb/group/en/about/supplying/code-of-conduct</a></li> <li><a href="https://global.abb/group/en/about/supplying/responsible-minerals">https://global.abb/group/en/about/supplying/responsible-minerals</a></li> <li><a href="https://global.abb/group/en/about/supplying/responsible-sourcing">https://global.abb/group/en/about/supplying/responsible-sourcing</a></li> </ul>			
2-25 Processes to remediate negative impacts	<ul style="list-style-type: none"> <li>Sustainability Report 2023: Sustainability at ABB, Sustainability governance</li> <li>Sustainability Report 2023: Integrity and transparency, We embed a culture of integrity and transparency</li> <li>Sustainability Report 2023: Integrity and transparency</li> <li>Sustainability Report 2023: Integrity and transparency, Responsible sourcing</li> <li>Sustainability Report 2023: Appendix, Approach to reporting</li> <li>Sustainability Report 2023: Social progress, Human rights and labor standards</li> <li>Sustainability Report 2023: Social progress, Diversity and inclusion</li> </ul> <p>Group website:</p> <ul style="list-style-type: none"> <li><a href="https://global.abb/group/en/about/integrity">https://global.abb/group/en/about/integrity</a></li> <li><a href="https://global.abb/group/en/about/integrity/resolving-issues">https://global.abb/group/en/about/integrity/resolving-issues</a></li> <li><a href="https://global.abb/group/en/about/integrity/reporting-channels">https://global.abb/group/en/about/integrity/reporting-channels</a></li> </ul>			

Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
2-26	Mechanisms for seeking advice and raising concerns	<ul style="list-style-type: none"> <li>Integrated Report 2023</li> <li>Sustainability Report 2023: Sustainability at ABB, Sustainability Governance</li> <li>Sustainability Report 2023: Social progress, Human rights and labor standards</li> </ul> <p>Group website:</p> <ul style="list-style-type: none"> <li><a href="https://global.abb/group/en/about/integrity/training-and-communications">https://global.abb/group/en/about/integrity/training-and-communications</a></li> <li><a href="https://global.abb/group/en/about/integrity/faq">https://global.abb/group/en/about/integrity/faq</a></li> </ul>		
2-27	Compliance with laws and regulations	No significant instances of non-compliance with laws and regulations to report for 2023.		
2-28	Membership associations		a. report industry associations, other membership associations, and national or international advocacy organizations in which it participates in a significant role.	Information unavailable/incomplete Currently under review.
2-29	Approach to stakeholder engagement	<ul style="list-style-type: none"> <li>Sustainability Report 2023: Sustainability at ABB, Materiality</li> <li>Sustainability report 2023: Social progress, We promote social progress, Stakeholder engagement</li> </ul>		
2-30	Collective bargaining agreements	<ul style="list-style-type: none"> <li>Sustainability report 2023: Social progress, Human rights and labor standards</li> </ul>		
<b>MATERIAL TOPICS</b>				
3-1	Process to determine material topics	<ul style="list-style-type: none"> <li>Sustainability Report 2023: Sustainability at ABB, Materiality</li> <li>Sustainability Report 2023: Social progress, Human rights and labor standards</li> </ul>		
3-2	List of material topics	<ul style="list-style-type: none"> <li>Sustainability Report 2023: Sustainability at ABB, Materiality</li> <li>Sustainability Report 2023: Social progress, Human rights and labor standards</li> <li>Sustainability Report 2023: Appendix, Material topic and impact descriptions</li> </ul>		
<b>ECONOMIC PERFORMANCE</b>				
3-3	Management of material topics	<ul style="list-style-type: none"> <li>Sustainability Report 2023: Sustainability at ABB, Materiality</li> <li>Sustainability Report 2023: Appendix, Material topic and impact descriptions</li> </ul>		



Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
201-1	<p>Direct economic value generated and distributed</p> <p>a. We do not disclose or explicitly state the term 'EVG&amp;D.' The below refers to the metrics defined in each section: i) Revenue - 29,363 (2311A)</p> <p>b. See above.</p>	<p>a. Direct economic value generated and distributed (EVG&amp;D) on an accruals basis, including the basic components for the organization's global operations as listed below. If data are presented on a cash basis, report the justification for this decision in addition to reporting the following basic components: ii. Economic value distributed: operating costs, employee wages and benefits, payments to providers of capital, payments to government by country, and community investments; iii. Economic value retained: 'direct economic value generated' less 'economic value distributed'.</p> <p>b. Where significant, report EVG&amp;D separately at country, regional, or market levels, and the criteria used for defining significance.</p>	<p>Information unavailable/incomplete</p>	<p>a) We do not disclose or explicitly state the term "EVG&amp;D". a. ii: We don't present any of the components as stated. Operating costs could be the combination of certain financial statement line items. Employee wages and benefits are components of several separate financial statement line items, payments to providers of capital (debt/dividends) would be on the cash flow statement, and then payments to government by country and community investments are not disclosed or tracked at that level. a. iii: Not disclosed in financial statements b: see above</p>
201-2	<p>Financial implications and other risks and opportunities due to climate change</p> <ul style="list-style-type: none"> <li>• Sustainability Report 2023: TCFD recommendations report</li> <li>• Sustainability Report 2023: EU Taxonomy report</li> </ul>			
201-3	<p>Defined benefit plan obligations and other retirement plans</p> <ul style="list-style-type: none"> <li>• Financial Report 2023: Note 17</li> </ul>	<p>c. If a fund set up to pay the plan's pension liabilities is not fully covered, explain the strategy, if any, adopted by the employer to work towards full coverage, and the timescale, if any, by which the employer hopes to achieve full coverage. d. Percentage of salary contributed by employee or employer. e. Level of participation in retirement plans, such as participation in mandatory or voluntary schemes, regional, or country-based schemes, or those with financial impact.</p>	<p>Confidentiality constraints</p>	<p>c. Funding strategy will vary by plan, influenced by the legislative framework in each country. Funding strategy is often negotiated with plan fiduciaries and the company does not want to publish any statement on strategy which might influence those negotiations. This information will therefore not be disclosed on confidentiality grounds. d. The percentage of salary contributed by employee and employer will vary for each plan. Disclosing an average figure would be meaningless without a full breakdown of employees by country and seniority. Disclosing details on a plan by plan basis would disclose details of ABB's overall remuneration which we wish to keep confidential. e. Disclosing this information at an aggregate level would be meaningless without a full breakdown of employees by country and employment status. Disclosing details on a plan by plan basis would disclose details of ABB's overall remuneration which we wish to keep confidential.</p>

Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
201-4 Financial assistance received from government	c. Financial Report 2023: Organizational Structure	a. Total monetary value of financial assistance received by the organization from any government during the reporting period, including: <ul style="list-style-type: none"> <li>i. tax relief and tax credits;</li> <li>ii. subsidies;</li> <li>iii. investment grants, research and development grants, and other relevant types of grant;</li> <li>iv. awards;</li> <li>v. royalty holidays;</li> <li>vi. financial assistance from Export Credit Agencies (ECAs);</li> <li>vii. financial incentives;</li> <li>viii. other financial benefits received or receivable from any government for any operation.</li> </ul> b. The information in 201-4-a by country.	Not applicable	a. Government assistance is a required disclosure, if material. As it is not material to ABB, there is no disclosure related to government assistance. b. We are not required to disclose this by country.

**MARKET PRESENCE**

3-3 Management of material topics	• Financial Report 2023: Management overview			
202-1 Ratios of standard entry level wage by gender compared to local minimum wage	ABB's 100k population spans 90+ countries with a significant population in the majority of the countries. Minimum wage rules are defined by the local CBA agreements and/or local legislation of the 90+ countries in which ABB has employees. ABB is compliant with the standards set-fourth in the CBA agreements and/or compliant to local legislation with regard to minimum wage rules.	a. When a significant proportion of employees are compensated based on wages subject to minimum wage rules, report the relevant ratio of the entry level wage by gender at significant locations of operation to the minimum wage. b. When a significant proportion of other workers (excluding employees) performing the organization's activities are compensated based on wages subject to minimum wage rules, describe the actions taken to determine whether these workers are paid above the minimum wage. c. Whether a local minimum wage is absent or variable at significant locations of operation, by gender. In circumstances in which different minimums can be used as a reference, report which minimum wage is being used. d. The definition used for 'significant locations of operation'.	Information unavailable/incomplete	In order to operate in over 90 countries, ABB must adhere to the local employment laws, regulations, and reporting standards of each country. These local country requirements are the responsibility of the applicable country HR, HR Services, employment law and compliance groups to ensure that ABB is compliant with each country's regulatory and employment law requirements. Unless required by law, ABB does not require all local country reporting to be stored or aggregated at Global Corporate level given the thousands of requirements that are maintained at a local level.
202-2 Proportion of senior management hired from the local community		a. Percentage of senior management at significant locations of operation that are hired from the local community. b. The definition used for 'senior management'. c. The organization's geographical definition of 'local'. d. The definition used for 'significant locations of operation'.	Information unavailable/incomplete	We do not collect data regarding this disclosure at the global level but we are investigating the feasibility of doing this in the future.

Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
<b>PROCUREMENT PRACTICES</b>				
3-3	Management of material topics	<p>For disclosures:</p> <ul style="list-style-type: none"> <li>Sustainability Report 2023: Preserving resources, We preserve resources</li> <li>Sustainability Report 2023: Integrity and transparency, Responsible sourcing</li> <li>Sustainability Report 2023: Integrity and transparency, We embed a culture of integrity and transparency</li> </ul> <p>For policies:</p> <ul style="list-style-type: none"> <li>ABB Supplier Code of Conduct</li> <li>ABB Code of Conduct: Working with suppliers</li> <li>ABB General Terms and Conditions</li> <li>ABB Conflict Minerals Policy</li> <li>ABB Human rights Policy and Due Diligence Framework</li> </ul>		
204-1	Proportion of spending on local suppliers	<p>e. Percentage of the procurement budget used for significant locations of operation that is spent on suppliers local to that operation (such as percentage of products and services purchased locally).</p> <p>f. The organization’s geographical definition of “local.”</p> <p>g. The definition used for “significant locations of operation.”</p>	Information unavailable/incomplete	This is managed locally and data is not consolidated at Group level. Data reported at Group level will show the budget split between the different regions (Europe, AMEA, AMC), but is not differentiated between local and non-local spend.
<b>ANTI-CORRUPTION</b>				
3-3	Management of material topics	<ul style="list-style-type: none"> <li>Sustainability Report 2023: Integrity and transparency</li> <li>Integrated Report 2023: We embed a culture of integrity and transparency along the extended value chain, Anti-Bribery and Anti-Corruption</li> </ul>		
205-1	Operations assessed for risks related to corruption		a. Total number and percentage of operations assessed for risks related to corruption.	Information unavailable/incomplete We do not consider this for reporting as of 2023.
205-2	Communication and training about anti-corruption policies and procedures	a. 100% - governance body members = EC	<p>b. Total number and percentage of employees that the organization’s anti-corruption policies and procedures have been communicated to, broken down by employee category and region.</p> <p>c. Total number and percentage of business partners that the organization’s anti-corruption policies and procedures have been communicated to, broken down by type of business partner and region. Describe if the organization’s anti-corruption policies and procedures have been communicated to any other persons or organizations.</p> <p>d. Total number and percentage of governance body members that have received training on anti-corruption, broken down by region.</p> <p>e. Total number and percentage of employees that have received training on anti-corruption, broken down by employee category and region.</p>	Information unavailable/incomplete We do not consider this for reporting as of 2023.

Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
205-3	Confirmed incidents of corruption and actions taken	<p>a. Total number and nature of confirmed incidents of corruption.</p> <p>b. Total number of confirmed incidents in which employees were dismissed or disciplined for corruption.</p> <p>c. Total number of confirmed incidents when contracts with business partners were terminated or not renewed due to violations related to corruption.</p> <p>d. Public legal cases regarding corruption brought against the organization or its employees during the reporting period and the outcomes of such cases.</p>	Confidentiality constraints	Not reported publicly on the basis of confidentiality/legal privilege, unless required by authorities/regulators.
<b>ANTI-COMPETITIVE BEHAVIOR</b>				
3-3	Management of material topics	<ul style="list-style-type: none"> <li>Integrated Report 2023: We embed a culture of integrity and transparency along the extended value chain</li> </ul>		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices		<p>a. Number of legal actions pending or completed during the reporting period regarding anti-competitive behavior and violations of anti-trust and monopoly legislation in which the organization has been identified as a participant.</p> <p>b. Main outcomes of completed legal actions, including any decisions or judgements.</p>	Confidentiality constraints Not reported publicly on the basis of confidentiality/legal privilege, unless required by authorities/regulators.
<b>TAX</b>				
3-3	Management of material topics	<ul style="list-style-type: none"> <li>ABB Tax Policy</li> </ul>		
207-1	Approach to tax	<ul style="list-style-type: none"> <li>ABB Tax Policy</li> </ul>		
207-2	Tax governance, control, and risk management	<ul style="list-style-type: none"> <li>ABB Tax Policy</li> </ul>		
207-3	Stakeholder engagement and management of concerns related to tax	<ul style="list-style-type: none"> <li>ABB Tax Policy</li> </ul>		



Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
207-4	Country-by-country reporting	<p>a. All tax jurisdictions where the entities included in the organization's audited consolidated financial statements, or in the financial information filed on public record, are resident for tax purposes.</p> <p>b. For each tax jurisdiction reported in Disclosure 207-4-a:</p> <ul style="list-style-type: none"> <li>i. Names of the resident entities;</li> <li>ii. Primary activities of the organization;</li> <li>iii. Number of employees, and the basis for the calculation of this number;</li> <li>iv. Revenues from third-party sales;</li> <li>v. Revenues from intra-group transactions with other tax jurisdictions;</li> <li>vi. Profit/loss before tax;</li> <li>vii. Tangible assets other than cash and cash equivalents;</li> <li>viii. Corporate income tax paid on a cash basis;</li> <li>ix. Corporate income tax accrued on profit/loss;</li> <li>x. Reasons for the difference between corporate income tax accrued on profit/loss and the tax due if the statutory tax rate is applied to profit/loss before tax.</li> </ul> <p>c. The time period covered by the information reported in Disclosure 207-4.</p>	Confidentiality constraints	ABB discloses consolidated tax information for ABB Group covering all operations worldwide, as required. ABB also submits statutory financial statements locally, inclusive of tax balances and disclosures, as required. Data per Country-by-Country report are commercially sensitive. Our competitors generally do not publish them. ABB must balance its responsibilities as a compliant taxpayer in each and every country in which it operates with the need to support competitive business growth.

**MATERIALS**

3-3	Management of material topics	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Preserving resources, We preserve resources</li> <li>• Sustainability Report 2023: Preserving resources, Circularity</li> <li>• Sustainability Report 2023: Preserving resources, Waste and water management</li> </ul>			
301-1	Materials used by weight or volume	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Appendix, GRI disclosures table</li> </ul>	Breakdown of materials used by weight and volume into non-renewable materials and renewable materials.	Information unavailable/incomplete	We publish the weight of the four main material groups which make up the main share of our products' weight. Other materials are omitted due to their insignificance in weight. The requirement to distinguish the materials into renewable/non-renewable was reviewed; as the ABB Circularity framework requires us to report data on material flows at a higher level, it was agreed not to integrate such a distinction into the framework, and we therefore report accordingly. In light of upcoming regulations with similar requirements, we will evaluate this decision again when needed and based on these requirements' materiality to ABB.

Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
301-2	Recycled input materials used	a. Percentage of recycled input materials used to manufacture the organization's primary products and services.	Information unavailable/incomplete	A review of this indicator for integration into the ABB Circularity framework has been conducted. As the ABB Circularity framework requires us to report data on material flows at a higher level, it was agreed not to integrate such a distinction into the framework, and we therefore report accordingly. In light of upcoming regulations with similar requirements, we will evaluate this decision again when needed and based on these requirements' materiality to ABB.
301-3	Reclaimed products and their packaging materials	a. Percentage of reclaimed products and their packaging materials for each product category. b. How the data for this disclosure have been collected.	Information unavailable/incomplete	A review of this indicator for integration into the ABB Circularity framework has been conducted. As the ABB Circularity framework requires us to report data on material flows at a higher level, it was agreed not to integrate such a distinction into the framework, and we therefore report accordingly. In light of upcoming regulations with similar requirements, we will evaluate this decision again when needed and based on these requirements' materiality to ABB.

**ENERGY**

3-3	Management of material topics	<ul style="list-style-type: none"> <li>Sustainability Report 2023: Low-carbon society, We enable a low-carbon society</li> <li>Sustainability Report 2023: Low-carbon society, Customer emissions</li> <li>Sustainability Report 2023: Low-carbon society, ABB's own emissions</li> <li>Sustainability Report 2023: Low-carbon society, Supplier emissions</li> <li>Sustainability Report 2023: Appendix, Approach to reporting</li> <li>Sustainability Report 2023: Appendix, SASB Disclosure table</li> </ul>		
302-1	Energy consumption within the organization	<ul style="list-style-type: none"> <li>Sustainability Report 2023: Appendix, GRI disclosures table</li> </ul>	Non-renewable fuel sources can include fuel for vehicles that are owned or controlled by the organization. c. Total fuel consumption within the organization from non-renewable sources, in joules or multiples, and including fuel types used. d. Total fuel consumption within the organization from renewable sources, in joules or multiples, and including fuel types used. e. In joules, watt-hours or multiples, the total: iv. steam consumption f. In joules, watt-hours or multiples, the total: ii. heating sold iii. cooling sold iv. steam sold	Information unavailable/incomplete  Measuring the energy use of our own fleet of leased vehicles is under review. Instead of disclosing total fuel consumption split by non-renewable and renewable sources, we report total energy consumption. Total consumption per fuel is covered in total energy consumption. To the best of our knowledge, no steam is used. To the best of our knowledge, we do not sell heating, cooling or steam.

Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
302-2	Energy consumption outside of the organization	<ul style="list-style-type: none"> <li>a. Energy consumption outside of the organization, in joules or multiples.</li> <li>b. Standards, methodologies, assumptions, and/or calculation tools used.</li> <li>c. Source of the conversion factors used.</li> </ul>	Information unavailable/incomplete	We calculate our scope 3 emissions in disclosure 305-3. Some categories of the scope 3 emissions are based on the energy consumption outside the organization. We do not report on this energy consumption yet. However, we are reviewing the option to extract this information from our scope 3 emissions calculation.
302-3	Energy intensity	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Appendix, GRI disclosures table</li> </ul>		
302-4	Reduction of energy consumption	<ul style="list-style-type: none"> <li>a. Amount of reductions in energy consumption achieved as a direct result of conservation and efficiency initiatives, in joules or multiples.</li> <li>b. Types of energy included in the reductions; whether fuel, electricity, heating, cooling, steam, or all.</li> <li>c. Basis for calculating reductions in energy consumption, such as base year or baseline, including the rationale for choosing it.</li> <li>d. Standards, methodologies, assumptions, and/or calculation tools used.</li> </ul>	Information unavailable/incomplete	Reported locally in a non-standardized way, which makes it difficult to aggregate. Method is under review.
302-5	Reductions in energy requirements of products and services	<ul style="list-style-type: none"> <li>a. Reductions in energy requirements of sold products and services achieved during the reporting period, in joules or multiples.</li> <li>b. Basis for calculating reductions in energy consumption, such as base year or baseline, including the rationale for choosing it.</li> <li>c. Standards, methodologies, assumptions, and/or calculation tools used.</li> </ul>	Information unavailable/incomplete	This information is currently not collected at Group level due to the size and complexity of ABB's portfolio of products, system and services.
<b>EMISSIONS</b>				
3-3	Management of material topics	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Low-carbon society, We enable a low-carbon society</li> <li>• Sustainability Report 2023: Low-carbon society, Customer emissions</li> <li>• Sustainability Report 2023: Low-carbon society, ABB's own emissions</li> <li>• Sustainability Report 2023: Low-carbon society, Supplier emissions</li> <li>• Sustainability Report 2023: Appendix, Approach to reporting</li> </ul>		
305-1	Direct (Scope 1) GHG emissions	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Appendix, GRI Disclosures table</li> </ul>		
305-2	Energy indirect (Scope 2) GHG emissions	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Appendix, GRI disclosures table</li> </ul>		
305-3	Other indirect (Scope 3) GHG emissions	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Appendix, GRI disclosures table</li> </ul>		
305-4	GHG emissions intensity	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Appendix, GRI disclosures table</li> </ul>		
305-5	Reduction of GHG emissions	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Appendix, GRI disclosures table</li> </ul>		

Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
305-6	Emissions of ozone-depleting substances (ODS)			
		d. Production, imports, and exports of ODS in metric tons of CFC-11 (trichlorofluoromethane) equivalent. e. Substances included in the calculation. f. Source of the emission factors used. g. Standards, methodologies, assumptions, and/or calculation tools used.	Information unavailable/incomplete	This indicator is being reviewed. We expect to disclose data next year. Ozone-depleting substances (ODS) are included in the ABB List of Prohibited and Restricted Substances. We measure the leakage of refrigerants from cooling systems.
305-7	Nitrogen oxides (NOx), sulfur oxides (Sox), and other significant air emissions	• Sustainability Report 2023: Appendix, GRI disclosures table		
		h. Significant air emissions, in kilograms or multiples, for each of the following: iii. Persistent organic pollutants (POP) v. Hazardous air pollutants (HAP) vi. Particulate matter (PM) c. Standards, methodologies, assumptions, and/or calculation tools used.	Not applicable	We do not report air emissions from POP, HAP and PM at Group level, since such emissions are not material to ABB. Where they may occur, they are managed in accordance with local legislation and environmental permits.

**SUPPLIER ENVIRONMENTAL ASSESSMENT**

3-3	Management of material topics	• ABB Supplier Code of Conduct		
308-1	New suppliers that were screened using environmental criteria	All new suppliers must follow a registration and qualification process before being able to become a supplier to ABB. Suppliers following the full qualification process are screened on environmental criteria. This is 54 percent of all suppliers.		
308-2	Negative environmental impacts in the supply chain and actions taken	Number of suppliers assessed for environmental impacts is 3104.	b. Number of suppliers identified as having significant actual and potential negative environmental impacts. c. Significant actual and potential negative environmental impacts identified in the supply chain. d. Percentage of suppliers identified as having significant actual and potential negative environmental impacts with which improvements were agreed upon as a result of assessment. e. Percentage of suppliers identified as having significant actual and potential negative environmental impacts with which relationships were terminated as a result of assessment, and why.	Information unavailable/incomplete  As part of SSBM we have on-site assessment and review adherence to regulatory and ABB requirements. We request our suppliers to implement a corrective action plan and follow up on its progress. Due to sensitivity we do not report externally on findings related to this topic. We only provide an overall overview of suppliers assessed and risks mitigated, and the number of suppliers with who we have terminated our business relationship.

**EMPLOYMENT**

3-3	Management of material topics	• Sustainability Report 2023: Social progress, Diversity and inclusion		
401-1	New employee hires and employee turnover	• Sustainability Report 2023: Social progress, Diversity and inclusion	Breakdowns by age group	Information unavailable/incomplete  We are adapting the global age group mapping to enable reporting against this indicator and it will be available in 2024.



Disclosure	Location	ABB omission statements			
		Requirement(s) omitted	Reason	Explanation	
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	The opportunity for stock ownership is offered by participation in either the Employee Share Acquisition Program (ESAP), or the Long-Term Incentive Plan (LTIP in form of a Performance Share Plan or Restricted Share Plan). The opportunity for stock ownership is the same for permanent full-time and permanent part-time employees at ABB. This is the case in all ABB locations where ESAP is offered.	f. Benefits which are standard for full-time employees of the organization but are not provided to temporary or part-time employees, by significant locations of operation. These include, as a minimum: i. life insurance; ii. health care; iii. disability and invalidity coverage; iv. parental leave; v. retirement provision; vi. others. g. The definition used for 'significant locations of operation'.	Confidentiality constraints	Due to sensitivity, such information is not disclosed. ABB meets all local regulatory requirements in terms of providing access to benefits to temporary or part time workers.  In terms of "vi. stock ownership" any stock program at ABB is equally offered to permanent full-time and permanent part-time employees in the same way, while they are not offered to temporary employees.
401-3	Parental leave	100% of our employees are entitled to parental leave.	b. Total number of employees that took parental leave, by gender. c. Total number of employees that returned to work in the reporting period after parental leave ended, by gender d. Total number of employees that returned to work after parental leave ended that were still employed 12 months after their return to work, by gender. e. Return to work and retention rates of employees that took parental leave, by gender."	Information unavailable/incomplete	Currently, we are not able to globally report on the requested parental leave-related data items, since related processes are managed locally. As it is the case for other time management and absence management items, data processes are managed locally due to the various practices and legal constraints specific to each country. Considering the sum of local characteristics and specificities, we have yet not been able to align a global reporting that allows us to provide comprehensive data for requirements under b./c./d./e. We are reviewing the requirements to enable reporting against the all requirements of the GRI indicator in the future.

**LABOR/MANAGEMENT RELATIONS**

3-3	Management of material topics	ABB's relationship with its employee representatives is governed by law and regulations. In line with ABB's culture, we are overall maintaining a transparent and trust-based relationship, which allows for early engagement and valuable discussions. Our policy respects the right of all personnel to form and join trade unions of their choice and to bargain collectively.			
402-1	Minimum notice periods regarding operational changes	a. ABB is following the respective legal and regulatory requirements for the engagement of employee representatives in relevant planned organizational changes, which affect employees. In general, affected employees are informed at the beginning of any such processes. b. In most of the collective bargaining agreements this is the case.			

Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
<b>OCCUPATIONAL HEALTH AND SAFETY</b>				
3-3	Management of material topics	<p>For disclosures:</p> <ul style="list-style-type: none"> <li>Sustainability Report 2023: Social progress, Health and safety</li> </ul> <p>For policies:</p> <ul style="list-style-type: none"> <li>ABB Supplier Code of Conduct</li> <li>ABB General Terms and Conditions</li> <li>ABB Code of Conduct, Health and safety</li> <li>ABB Policy on Health, Safety, Environment, Security and Sustainability</li> </ul>		
403-1	Occupational health and safety management system	<p>For disclosures:</p> <ul style="list-style-type: none"> <li>Sustainability Report 2023, Appendix, Approach to reporting</li> <li>Sustainability Report 2023, Social progress, Health and safety</li> </ul> <p>For policies:</p> <ul style="list-style-type: none"> <li>ABB Supplier Code of Conduct</li> <li>ABB General Terms and Conditions</li> <li>ABB Code of Conduct, Health and safety</li> <li>ABB Policy on Health, Safety, Environment, Security and Sustainability</li> </ul>		
403-2	Hazard identification, risk assessment, and incident investigation	<ul style="list-style-type: none"> <li>Sustainability Report 2023, Appendix, Approach to reporting</li> <li>Sustainability Report 2023, Social progress, Health and safety</li> <li>ABB Code of Conduct</li> </ul>		
403-3	Occupational health services	Where required by law and regulations ABB has the necessary occupational health services, that are certified by local regulations.		
403-4	Worker participation, consultation, and communication on occupational health and safety	<ul style="list-style-type: none"> <li>Sustainability Report 2023: Social progress, Health and safety</li> </ul>		
403-5	Worker training on occupational health and safety	<ul style="list-style-type: none"> <li>Sustainability Report 2023: Social progress, Health and safety</li> </ul>		
403-6	Promotion of worker health	<ul style="list-style-type: none"> <li>Sustainability Report 2023: Social progress, Health and safety</li> </ul>		
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	<ul style="list-style-type: none"> <li>Sustainability Report 2023: Social progress, Health and safety</li> </ul>		
403-8	Workers covered by an occupational health and safety management system	<p>a.i: 100%</p> <p>b.ii: 100%</p> <p>c.iii: 100%</p> <p>d.No workers have been excluded.</p> <p>e.The management system is mandatory for all employees and contractors. The total coverage is estimated to be 99% as there will be theoretically new acquisitions that have not yet implemented the Management System.</p>		

Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
403-9 Work-related injuries	<p>a.Sustainability Report 2023: Appendix, GRI disclosures table                      b.Sustainability Report 2023: Appendix, GRI disclosures table                      c.Sustainability Report 2023: Appendix, GRI disclosures table                      d.Sustainability Report 2023: Appendix, GRI disclosures table                      e.Rates calculated based on 200,000 hours worked.                      f. No workers have been excluded from this disclosure.                      g.For the LTIFR calculation we use the total workforce, which is a combined number of ABB employees and embedded contractors (not employees but their work and/or workplace is controlled by the organization). The employee numbers we receive from ABACUS as FTE. The contractor hours are collected at the site-level and each month reported. LTIFR includes lost time injuries and illnesses, and serious injuries, but excludes fatalities.</p> <p>All hazards and incidents are being investigated and action plans are formulated and executed after investigations.                      As a result of mergers and acquisitions, there may always be a percentage of employees not yet covered by the HSE programs and therefore by this disclosure.</p>			
403-10 Work-related ill health		<p>h.For all employees:                      i. The number of fatalities as a result of work-related ill health;                      ii. The number of cases of recordable work-related ill health;                      iii. The main types of work-related ill health.                      i. For all workers who are not employees but whose work and/or workplace is controlled by the organization:                      i. The number of fatalities as a result of work-related ill health;                      ii. The number of cases of recordable work-related ill health;                      iii. The main types of work-related ill health.                      j. The work-related hazards that pose a risk of ill health, including:                      i. how these hazards have been determined;                      ii. which of these hazards have caused or contributed to cases of ill health during the reporting period;                      iii. actions taken or underway to eliminate these hazards and minimize risks using the hierarchy of controls.                      k. Whether and, if so, why any workers have been excluded from this disclosure, including the types of worker excluded.                      l. Any contextual information necessary to understand how the data have been compiled, such as any standards, methodologies, and assumptions used.</p>	Information unavailable/incomplete	Data is not qualitatively sufficient. Process to capture data under development.

Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
<b>TRAINING AND EDUCATION</b>				
3-3	Management of material topics	<ul style="list-style-type: none"> <li>• ABB Human Rights policy and due diligence statement</li> <li>• ABB Code of Conduct, Fair employment, diversity &amp; inclusion</li> <li>• Sustainability Report 2023: Social progress, Diversity and inclusion</li> <li>• Integrated Report 2023: Performance, We promote social progress, Diversity &amp; inclusion and employee engagement</li> <li>• ABB Group website: Diversity and Inclusion</li> <li>• ABB Group website: Sustainability Agenda</li> </ul>		
404-1	Average hours of training per year per employee	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Appendix, GRI disclosures table</li> </ul>		
404-2	Programs for upgrading employee skills and transition assistance programs		<p>m. Type and scope of programs implemented and assistance provided to upgrade employee skills.</p> <p>n. Transition assistance programs provided to facilitate continued employability and the management of career endings resulting from retirement or termination of employment.</p>	<p>Information unavailable/incomplete</p> <p>Data are fragmented in local systems. There will be an analysis in the upcoming periods to check the feasibility of collecting and reporting on this data.</p>
404-3	Percentage of employees receiving regular performance and career development reviews	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Appendix, GRI disclosures table</li> </ul>		
<b>NON-DISCRIMINATION</b>				
3-3	Management of material topics	<p>For disclosures:</p> <ul style="list-style-type: none"> <li>• Sustainability Report 2023: Social progress, Human rights and labor standards</li> <li>• Sustainability Report 2023: Social progress, Diversity and inclusion</li> <li>• Sustainability Report 2023: Integrity and transparency</li> </ul> <p>For policies:</p> <ul style="list-style-type: none"> <li>• ABB Code of Conduct</li> <li>• ABB Human Rights Policy and Due Diligence Framework</li> <li>• ABB Ltd Modern Slavery Statement</li> <li>• ABB Supplier Code of Conduct</li> </ul>		
406-1	Incidents of discrimination and corrective actions taken	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Appendix, GRI disclosures table</li> </ul>	<p>b. Status of the incidents and actions taken with reference to the following:</p> <ul style="list-style-type: none"> <li>ii. Remediation plans being implemented;</li> <li>iii. Remediation plans that have been implemented, with results reviewed through routine internal management review processes;</li> </ul>	<p>Confidentiality constraints</p> <p>The information is confidential and subject to legal privilege, and not being reported as of 2023.</p>
<b>FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING</b>				
3-3	Management of material topics	<ul style="list-style-type: none"> <li>• ABB Human Rights Policy and Due Diligence Framework</li> </ul>		



Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	<p>ABB has a rigorous approach to identify countries and commodities where amongst other risks, risk to workers' rights to exercise freedom of association or collective bargaining is at risk. This has resulted in a list of focus countries and high-risk commodities.</p> <p>Type of operations: suppliers of direct and raw materials. Focus countries: Argentina, Brazil, Bulgaria, China, Colombia, India, Indonesia, Malaysia, Mexico, Peru, Poland, Saudi Arabia, South Africa, Thailand, Türkiye, Vietnam</p> <p>We conduct on-site assessments. If suppliers are not following requirements on freedom of association and collective bargaining, we request our suppliers to implement a corrective action plan and follow-up on the progress.</p> <p>Regarding our operations, we conduct human rights site assessments as part of our annual internal governance and assurance program. The human rights element includes labor rights and is part of regular assessment within the HSE/Sustainability assessment procedures. If any elements do not meet the required standards, the responsible manager has to identify OFI (opportunity for improvement) or NC (non conformity) requiring specific action plans to manage the NC.</p>		
<b>CHILD LABOR</b>				
3-3	Management of material topics	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Social progress, Human rights and labor standards</li> <li>• Sustainability Report 2023: Integrity and transparency, Responsible sourcing</li> </ul> <p>Regarding our operations, we conduct human rights site assessments as part of our annual internal governance and assurance program. The human rights element includes child labor and is part of regular assessment within the HSE/Sustainability assessment procedures. If any elements do not meet the required standards, the responsible manager has to identify OFI (opportunity for improvement) or NC (non-conformity) requiring specific action plans to manage the NC.</p>		

Disclosure	Location	ABB omission statements		
		Requirement(s) omitted	Reason	Explanation
408-1	Operations and suppliers at significant risk for incidents of child labor	c. Operations and suppliers considered to have significant risk for incidents of: <ol style="list-style-type: none"> <li>i. child labor;</li> <li>ii. young workers exposed to hazardous work.</li> </ol> b. Operations and suppliers considered to have significant risk for incidents of child labor either in terms of: <ol style="list-style-type: none"> <li>i. type of operation (such as manufacturing plant) and supplier;</li> <li>ii. countries or geographic areas with operations and suppliers considered at risk.</li> </ol> c. Measures taken by the organization in the reporting period intended to contribute to the effective abolition of child labor.	Information unavailable/incomplete	During 2023 we undertook business-specific reviews of our salient human rights issues and analyses of our human rights due diligence processes, and validated our conclusions through internal and external stakeholder engagement.  This work confirmed child labor as a salient human rights issue for ABB, focused on our extended supply chain, rather than as a significant risk in our own operations.  In the supply chain, we continued our work to ensure the responsible sourcing of conflict minerals and other minerals of interest.
<b>FORCED OR COMPULSORY LABOR</b>				
3-3	Management of material topics	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Social progress, Human rights and labor standards</li> <li>• Sustainability Report 2023: Integrity and transparency, Responsible sourcing</li> </ul>		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Social progress, Human rights and labor standards</li> <li>• Sustainability Report 2023: Integrity and transparency, Responsible sourcing</li> </ul>		
<b>SECURITY PRACTICES</b>				
3-3	Management of material topics	ABB has a group of internal security managers globally, who provide expertise to the business management in the areas of travel risk, security risk and crisis response. The management of third-party private security companies is the responsibility of local site management teams.		
410-1	Security personnel trained in human rights policies or procedures	All internal security managers have received internal training in the organization's human rights policies and their application to security.	b. Whether training requirements also apply to third-party organizations providing security personnel.	Information unavailable/incomplete  ABB internal security personnel have been trained on security and human rights principles. All contracts with third-party security personnel carry a clause to confirm that the third-party abides by the voluntary principle on security and human rights. Due to the management of third-party private security companies on a local level, detailed information is currently not available on Group level.
<b>RIGHTS OF INDIGENOUS PEOPLES</b>				
3-3	Management of material topics	<ul style="list-style-type: none"> <li>• Sustainability Report 2023: Social progress, Human rights and labor standards</li> </ul>		

Disclosure	Location	ABB omission statements			
		Requirement(s) omitted	Reason	Explanation	
411-1	Incidents of violations involving rights of indigenous peoples	• Sustainability Report 2023: Social progress, Human rights and labor standards			
<b>LOCAL COMMUNITIES</b>					
3-3	Management of material topics	• Sustainability Report 2023: Social progress, Community engagement			
413-1	Operations with local community engagement, impact assessments, and development programs		c. Percentage of operations with implemented local community engagement, impact assessments, and/ or development programs, including the use of: <ul style="list-style-type: none"> <li>i. social impact assessments, including gender impact assessments, based on participatory processes;</li> <li>ii. environmental impact assessments and ongoing monitoring;</li> <li>iii. public disclosure of results of environmental and social impact assessments;</li> <li>iv. local community development programs based on local communities' needs;</li> <li>v. stakeholder engagement plans based on stakeholder mapping;</li> <li>vi. broad-based local community consultation committees and processes that include vulnerable groups;</li> <li>vii. works councils, occupational health and safety committees and other worker representation bodies to deal with impacts;</li> <li>viii. formal local community grievance processes</li> </ul>	Information unavailable/ incomplete	Managed locally, global and coordinated process not available. Some questions are included in annual social reporting but not systematically released. We have a high-level focus and are not able to release data at local level. Because we report on more than 400 projects, it is not possible to provide a collective assessment of the impact of diverse projects run in more than 40 countries.
413-2	Operations with significant actual and potential negative impacts on local communities		a. Operations with significant actual and potential negative impacts on local communities, including: <ul style="list-style-type: none"> <li>i. the location of the operations;</li> <li>ii. the significant actual and potential negative impacts of operations</li> </ul>	Information unavailable/ incomplete	Managed locally, global and coordinated process not available. While the question is included in annual social reporting, it is not answered in a meaningful fashion. No process and systematic impact analysis (impacts including social and environment)
<b>SUPPLIER SOCIAL ASSESSMENT</b>					
3-3	Management of material topics	• Sustainability Report 2023: Integrity and transparency, Responsible sourcing			
414-1	New suppliers that were screened using social criteria	All new suppliers must follow a registration and qualification process before being able to become a supplier to ABB. Suppliers following the full qualification process are screened on social criteria. This is 54 percent of all new suppliers.			

Disclosure	Location	ABB omission statements			
		Requirement(s) omitted	Reason	Explanation	
414-2	Negative social impacts in the supply chain and actions taken	Number of suppliers assessed for social impacts is 3014.	b. Number of suppliers assessed for social impacts. Number of suppliers identified as having significant actual and potential negative social impacts. c. Significant actual and potential negative social impacts identified in the supply chain. d. Percentage of suppliers identified as having significant actual and potential negative social impacts with which improvements were agreed upon as a result of assessment. e. Percentage of suppliers identified as having significant actual and potential negative social impacts with which relationships were terminated as a result of assessment, and why.	Not applicable	As part of SSBM we have on-site assessment and review adherence to regulatory and ABB requirements. We request to our suppliers to implement a corrective action plan and follow-up on the progress. Due to sensitivity we do not report externally on findings related to this topic. We only provide an overall overview of suppliers assessed and risks mitigated, and the number of suppliers with who we have terminated our business relationship.
<b>PUBLIC POLICY</b>					
3-3	Management of material topics	• ABB Code of Conduct: Working with governments			
415-1	Political contributions	• Sustainability Report 2023: Appendix, GRI Disclosures table	b. If applicable, how the monetary value of in-kind contributions was estimated.	Not applicable	ABB funds, property or services must not be used to make political donations or support any candidate for political office, or political party, official or committee anywhere in the world.
<b>CUSTOMER PRIVACY</b>					
3-3	Management of material topics	• ABB Code of Conduct: Privacy and personal data			
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data		a. Total number of substantiated complaints received concerning breaches of customer privacy, categorized by: <ul style="list-style-type: none"> <li>i. complaints received from outside parties and substantiated by the organization;</li> <li>ii. complaints from regulatory bodies.</li> </ul> b. Total number of identified leaks, thefts, or losses of customer data. c. If the organization has not identified any substantiated complaints, a brief statement of this fact is sufficient.	Confidentiality constraints	Confidentiality constraints: Further to this, we deem this information confidential, hence it is not disclosed at this time.



# EU Taxonomy: Disclosures for the financial year 2023

## EU Taxonomy: Background and objectives

At ABB, we are determined to shape our future in an environmentally sustainable way by investing in environmentally sustainable activities. The pursuit of environmentally sustainable business is not only important to the public – but it also represents the paramount challenge of our times. To help address this challenge, the European Union (EU) has taken the lead in standardizing sustainability-related data and defining environmentally sustainable criteria and objectives.

As part of the European Green Deal, the EU aims to become climate-neutral and to reduce GHG emissions generated within its borders to net zero by 2050. With the Action Plan on Financing Sustainable Growth, the European Commission intends to reorient the European economic and financial system towards more sustainable technologies and businesses. The EU Taxonomy is the cornerstone of the EU's Green Deal and Sustainable Finance Action Plan, as it aims to direct capital flows specifically into sustainable projects and companies. The Regulation (EU) 2020/852 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2099 and the supplementing Delegated Acts, hereafter referred to as the Taxonomy Regulation, serve as a standardized and binding classification system to determine which economic activities in the EU are considered as “environmentally sustainable.” The EU Taxonomy defines “environmentally sustainable” business activities, based on the six pre-defined environmental objectives<sup>1</sup>.

By providing companies, investors, and policymakers with explicit definitions, the EU Taxonomy seeks to identify and scale up green investments, inhibit “greenwashing” and promote greater transparency regarding the true environmental sustainability of economic activities.

The Taxonomy Regulation distinguishes between “taxonomy-eligible” and “taxonomy-aligned” economic activities.

An economic activity is considered “eligible” if it is described in the adopted Delegated Acts, irrespective of whether that economic activity meets any of the established technical screening criteria. Consequently, economic activities are considered “non-eligible” under the EU Taxonomy when they are not specifically described in the Delegated Acts.

From financial year 2022, the Taxonomy Regulation requires affected companies to disclose their environmentally sustainable activities (i.e., taxonomy-aligned activities). An eligible activity is only considered environmentally sustainable, and thus taxonomy-aligned, if it meets the technical screening criteria (TSC):

- Makes a substantial contribution to one of the environmental objectives by complying with the substantial contribution (SC) criteria defined for the activity (e.g., level of carbon emissions),
- Meets the “do no significant harm” (DNSH) criteria, having no negative effect on any of the other five environmental objectives (e.g., from the asset, process, or product), and
- Complies with the minimum safeguards (MS) related primarily to human rights and social and labor standards.

<sup>1</sup> Climate change mitigation, climate change adaptation, sustainable use and protection of water and marine resources, transition to a circular economy, pollution prevention and control, and protection and restoration of biodiversity and ecosystem.

<sup>2</sup> Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088.

- 3 Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021 supplementing Regulation (EU) 2020/852.
- 4 Commission Delegated Regulation (EU) 2023/2485 of 27 June 2023 amending Delegated Regulation (EU) 2021/2139.
- 5 Commission Delegated Regulation (EU) 2021/2178 of 6 July 2021 supplementing Regulation (EU) 2020/852.
- 6 Commission Delegated Regulation (EU) 2023/2486 of 27 June 2023 amending Commission Delegated Regulation (EU) 2021/2178.
- 7 Commission Delegated Regulation (EU) 2022/1214 of 9 March 2022 amending Delegated Regulation (EU) 2021/2139.
- 8 Commission Delegated Regulation (EU) 2023/2486 of 27 June 2023 supplementing Regulation (EU) 2020/852.
- 9 According to Article 16 of Regulation (EU) 2020/852, an economic activity shall qualify as contributing substantially to one or more of the environmental objectives “by directly enabling other activities to make a substantial contribution to one or more of those objectives, provided that such economic activity: (a) does not lead to a lock-in of assets that undermine long-term environmental goals, considering the economic lifetime of those assets; and (b) has a substantial positive environmental impact, on the basis of life-cycle considerations.”

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## How ABB adopted the EU Taxonomy

For the first year of reporting, on financial year 2021, disclosures were limited to the proportions of Taxonomy-eligible and Taxonomy-non-eligible turnover, capital expenditure (Capex) and operating expenditure (Opex), as well as qualitative information, for the objectives of climate change mitigation and adaptation.

For the second year of reporting, on financial year 2022, the disclosure requirements were expanded. In addition to the previous disclosures, companies also needed to disclose the proportions of “Taxonomy-aligned” turnover, Capex and Opex, along with supporting qualitative information, still only for the two climate objectives.

For the third year of reporting, on financial year 2023, the number of activities and corresponding disclosures were further enlarged. In addition to the 2022 disclosures on Taxonomy-aligned turnover, Capex and Opex, companies now need to report on Taxonomy-eligibility of additional economic activities covered under the amended Climate Delegated Act, as well as for the four remaining environmental objectives introduced by the Environmental Delegated Act.

Taxonomy related disclosures should be prepared in line with the Taxonomy Regulation Article 8, and the related Delegated Acts. The legal framework for the EU Taxonomy reporting and disclosure obligations was further expanded in 2023. It currently consists of the following elements: the Taxonomy Regulation<sup>2</sup>, the Climate Delegated Act<sup>3</sup> (as amended in June 2023<sup>4</sup>), the Disclosures Delegated Act<sup>5</sup> (as amended in June 2023<sup>6</sup>), the Complementary Climate Delegated Act<sup>7</sup>, and the Environmental Delegated Act<sup>8</sup>, including their various Annexes. In addition, the Taxonomy FAQs and Notices published by the European Commission have been taken into consideration in our disclosures, where relevant.

The Taxonomy Regulation is a living legislation, dynamic in its development; the formulations and terms contained in these pieces of legislation are sometimes subject to uncertainty in interpretation and require further clarification. Therefore, the following disclosures rely on our own interpretation; the approach applied for this year’s reporting is updated in comparison to last year and may not apply in the same way in the future.

In 2021, following the release of the Climate Delegated Act, we conducted a first eligibility analysis of our products, sites and activities and reviewed them against the economic activities defined by the Taxonomy in all the countries in which we operate. We opted for a decentralized approach, involving the expertise of our product managers, real estate managers, sustainability managers, financial controllers, R&D controllers, and environmental managers across all levels of our organization and solicited advice from external consultants.

In 2022, relevant Taxonomy-aligned activities were identified across the Group, with alignment results published for the first time.

In 2023, a thorough review was conducted to accommodate the changes introduced by the Environmental Delegated Act and changes to the Disclosures and Climate Delegated Acts (e.g. additions of new activities, changes in technical screening criteria, or changes of the description of activities).

To assess eligibility, we reviewed the ABB Global product offering and matched it to the economic activities defined by the Taxonomy Delegated Acts. Most of our eligible products and services are considered “enabling activities” as defined by the Taxonomy<sup>9</sup>, meaning economic activities that “directly enable other activities to make a substantial contribution” to one of the environmental objectives. ABB business activities, products, and solutions that are not described in the Taxonomy Delegated Acts are deemed “non-eligible” and thus are not in scope of the Taxonomy reporting.

To identify the relevant activities, we referred to the descriptions of the activities, the relevant Nomenclature of Economic Activities (NACE) codes and, if necessary, the substantial contribution criteria, thereby assessing whether a business activity

carried out by ABB matches an activity description. Each ABB business division then broke down their offerings or economic activities to the level of granularity required to identify and cross check with the eligibility and alignment criteria.

The mapping of ABB's real estate initiatives at country level, the EU Taxonomy data collection as well as the reporting was coordinated centrally. Capex was identified either centrally, at the division level (e.g., large investments), or at the country level (e.g., real estate) and then mapped to the relevant activity or allocated to activities based on the percentage of eligible and/or aligned revenue. Opex activities were analyzed for the purpose of Taxonomy reporting under a twofold approach:

1. R&D activities identified based on the product mapping, and
2. other Opex allocated based on the percentage of eligible and aligned turnover<sup>10</sup>.

ABB's Sustainability Board and the Finance, Audit and Compliance Committee of the Board were kept informed of progress, possible risks and obstacles, as well as current developments regarding the Taxonomy reporting.

As a technology leader in electrification and automation, ABB plays a key role in accelerating the energy transition to a net-zero future. Our solutions help optimize, electrify and decarbonize the industry, buildings, power, and transport sectors that together account for a significant share of global environmental impacts. As a result, ABB enables a more sustainable and resource-efficient future through all our business activities. ABB's strategy is deeply rooted in our purpose and is designed to accelerate profitable growth by capitalizing on key global trends.

Our purpose is the cornerstone of ABB's direction and strategy. Through our technologies and responsible business practices, we aim to make our stakeholders and society more sustainable. We achieve this by addressing the world's energy challenges, transforming industries and embedding sustainability in all our activities and processes across our value chain. Our purpose is based on five themes that capture the essence of what ABB stands for, what we aspire to, and how we make a permanent sustainable impact: creating success, leading with technology, addressing the world's energy challenges, transforming industries, and embedding sustainability. With these themes in mind, we enable a more sustainable and resource-efficient future with our technology leadership in all our key markets.

More information about ABB divisions and activities can be found in the chapter "Businesses" of the Consolidated Financial Statements 2023.

#### **Eligibility and substantial contribution assessments**

A selection of our activities in the Electrification, Motion, Process Automation and Robotics & Discrete Automation business areas, together with our Real Estate activities, are eligible under the EU Taxonomy to contribute to the environmental objective of climate change mitigation. In addition, some of our activities are eligible under the environmental objective of transitioning to a circular economy.

On the basis of the analysis of the economic activities, our main contribution remains in climate change mitigation.

The table below presents the allocation of our activities to the economic activities listed in the EU Taxonomy under the environmental objectives of climate change mitigation and transition to a circular economy. Changes may be made to this list of economic activities in the future as new economic activities that better fit ABB's portfolio could be further released by the European Commission. In addition, a more detailed assessment of the technical screening criteria (TSC) for the activities introduced in 2023 is still underway.

<sup>10</sup> The terms turnover and revenue are used interchangeably throughout this document.

## **Economic activities of ABB in the context of the EU Taxonomy**

**ABB Group Economic activities 2023 in accordance with the EU Taxonomy (“Taxonomy-eligible”)**

<b>Economic activity under the EU Taxonomy</b>	<b>Description of economic activity</b>	<b>Application to ABB Group business areas and functions</b>
<b>ENVIRONMENTAL OBJECTIVE: CLIMATE CHANGE MITIGATION</b>		
<b>3. MANUFACTURING</b>		
3.1 Manufacture of renewable energy technologies	<ul style="list-style-type: none"> <li>Manufacture of renewable energy technologies, as renewable energy is defined in Article 2(1) of Directive (EU) 2018/2001</li> </ul>	<ul style="list-style-type: none"> <li>Electrification</li> <li>Motion</li> <li>Process Automation</li> </ul>
3.2 Manufacture of equipment for the production and use of hydrogen	<ul style="list-style-type: none"> <li>Manufacture of equipment for the production and use of hydrogen</li> </ul>	<ul style="list-style-type: none"> <li>Motion</li> </ul>
3.3 Manufacture of low-carbon technologies for transport	<ul style="list-style-type: none"> <li>Manufacture, repair, maintenance, retrofitting, repurposing and upgrading of low-carbon vehicles, rolling stock and vessels</li> </ul>	<ul style="list-style-type: none"> <li>Electrification</li> <li>Motion</li> <li>Process Automation</li> </ul>
3.4 Manufacture of batteries	<ul style="list-style-type: none"> <li>Manufacture of rechargeable batteries, battery packs and accumulators for transport, stationary and off-grid energy storage, and other industrial applications.</li> <li>Manufacture of respective components</li> </ul>	<ul style="list-style-type: none"> <li>Motion</li> </ul>
3.5 Manufacture of energy efficiency equipment for buildings	<ul style="list-style-type: none"> <li>Manufacture of energy efficiency equipment for buildings</li> </ul>	<ul style="list-style-type: none"> <li>Electrification</li> <li>Motion</li> <li>Robotics &amp; Discrete Automation</li> </ul>
3.6 Manufacture of other low-carbon technologies	<ul style="list-style-type: none"> <li>Manufacture of technologies aimed at substantial GHG emission reductions in other sectors of the economy, where those technologies are not covered by activities 3.1 to 3.5</li> </ul>	<ul style="list-style-type: none"> <li>Process Automation</li> </ul>
3.19 Manufacture of rail rolling stock constituents (newly added in 2023)	<ul style="list-style-type: none"> <li>Manufacture, installation, technical consulting, retrofitting, upgrade, repair, maintenance, and repurposing of products, equipment, systems, and software related to the rail constituents detailed in Point 2.7 of Annex II to Directive (EU) 2016/797</li> </ul>	<ul style="list-style-type: none"> <li>Electrification</li> </ul>
3.20 Manufacture, installation, and servicing of high, medium and low voltage electrical equipment for electrical transmission and distribution that result in or enable a substantial contribution to climate change mitigation (newly added in 2023)	<ul style="list-style-type: none"> <li>The economic activity develops, manufactures, installs, maintains or services electrical products, equipment or systems, or software aimed at substantial GHG emission reductions in high, medium and low voltage electrical transmission and distribution systems through electrification, energy efficiency, integration of renewable energy or efficient power conversion.</li> </ul>	<ul style="list-style-type: none"> <li>Electrification</li> <li>Motion</li> <li>Process Automation</li> </ul>
<b>4. ENERGY</b>		
4.9 Transmission and distribution of electricity	<ul style="list-style-type: none"> <li>Construction and operation of transmission systems that transport the electricity on the extra high-voltage and high-voltage interconnected system.</li> <li>Construction and operation of distribution systems that transport electricity on high-voltage, medium-voltage and low-voltage distribution systems</li> </ul>	<ul style="list-style-type: none"> <li>Motion</li> </ul>
<b>6. TRANSPORT</b>		
6.5 Transport by motorbikes, passenger cars and light commercial vehicles	<ul style="list-style-type: none"> <li>Purchase, financing, renting, leasing and operation of vehicles designated as category M1 (232), N1 (233), both falling under the scope of Regulation (EC) No 715/2007 of the European Parliament and of the Council, or L (2- and 3-wheel vehicles and quadricycles).</li> </ul>	<ul style="list-style-type: none"> <li>Electrification</li> <li>Motion</li> <li>Process Automation</li> <li>Robotics &amp; Discrete Automation</li> </ul>



Economic activity under the EU Taxonomy	Description of economic activity	Application to ABB Group business areas and functions
6.14 Infrastructure for rail transport	<ul style="list-style-type: none"> <li>Construction, modernization, operation and maintenance of railways and subways as well as bridges and tunnels, stations, terminals, rail service facilities, safety and traffic management systems including the provision of architectural services, engineering services, drafting services, building inspection services and surveying and mapping services and the like as well as the performance of physical, chemical and other analytical testing of all types of materials and products.</li> </ul>	<ul style="list-style-type: none"> <li>Electrification</li> </ul>
6.15 Infrastructure enabling low-carbon road transport and public transport	<ul style="list-style-type: none"> <li>Construction, modernization, maintenance and operation of infrastructure that is required for zero tailpipe CO<sub>2e</sub> operation of zero-emissions road transport, as well as infrastructure dedicated to transshipment and infrastructure required for operating urban transport</li> </ul>	<ul style="list-style-type: none"> <li>Electrification</li> <li>Process Automation</li> </ul>
6.16 Infrastructure enabling low-carbon water transport	<ul style="list-style-type: none"> <li>Construction, modernization, operation and maintenance of infrastructure that is required for zero tailpipe CO<sub>2e</sub> operation of vessels or the port's own operations, as well as infrastructure dedicated to transshipment</li> </ul>	<ul style="list-style-type: none"> <li>Electrification</li> <li>Process Automation</li> </ul>
<b>7. CONSTRUCTION AND REAL ESTATE</b>		
7.2 Renovation of existing buildings	<ul style="list-style-type: none"> <li>Construction and civil engineering works or preparation thereof</li> </ul>	<ul style="list-style-type: none"> <li>Real Estate</li> </ul>
7.3 Installation, maintenance and repair of energy efficiency equipment	<ul style="list-style-type: none"> <li>Individual renovation measures consisting of installation, maintenance or repair of energy efficiency equipment</li> </ul>	<ul style="list-style-type: none"> <li>Real Estate</li> </ul>
7.4 Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)	<ul style="list-style-type: none"> <li>Installation, maintenance and repair of charging stations for electric vehicles in buildings and parking spaces attached to buildings</li> </ul>	<ul style="list-style-type: none"> <li>Real Estate</li> </ul>
7.5 Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	<ul style="list-style-type: none"> <li>Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings</li> </ul>	<ul style="list-style-type: none"> <li>Process Automation</li> <li>Real Estate</li> </ul>
7.6 Installation, maintenance, and repair of renewable energy technologies	<ul style="list-style-type: none"> <li>Installation, maintenance and repair of renewable energy technologies, on-site</li> </ul>	<ul style="list-style-type: none"> <li>Electrification</li> <li>Real Estate</li> </ul>
7.7 Acquisition and ownership of buildings	<ul style="list-style-type: none"> <li>Buying real estate and exercising ownership of that real estate</li> </ul>	<ul style="list-style-type: none"> <li>Real Estate</li> </ul>
<b>8. INFORMATION &amp; COMMUNICATION</b>		
8.2 Data-driven solutions for GHG emissions reductions	<ul style="list-style-type: none"> <li>Development or use of ICT solutions that are aimed at collecting, transmitting, storing data and at its modelling and use where those activities are predominantly aimed at the provision of data and analytics enabling GHG emission reductions; such ICT solutions may include, inter alia, the use of decentralized technologies (i.e., distributed ledger technologies), Internet of Things (IoT), 5G and artificial intelligence</li> </ul>	<ul style="list-style-type: none"> <li>Process Automation</li> </ul>
<b>9. PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES</b>		
9.1 Close to market research, development and innovation	<ul style="list-style-type: none"> <li>Research, applied research and experimental development of solutions, processes, technologies, business models and other products dedicated to the reduction, avoidance or removal of GHG emissions (RD&amp;I) for which the ability to reduce, remove or avoid GHG emissions in the target economic activities has at least been demonstrated in a relevant environment, corresponding to at least Technology Readiness Level 6</li> </ul>	<ul style="list-style-type: none"> <li>R&amp;D</li> </ul>

Economic activity under the EU Taxonomy	Description of economic activity	Application to ABB Group business areas and functions
<b>ENVIRONMENTAL OBJECTIVE: TRANSITION TO A CIRCULAR ECONOMY (NEWLY ADDED IN 2023)</b>		
<b>1. MANUFACTURING</b>		
1.2 Manufacture of electrical and electronic equipment	• Manufacturing of electrical and electronic equipment for industrial, professional and consumer use	• Motion • Process Automation
<b>4. INFORMATION &amp; COMMUNICATION</b>		
4.1 Provision of IT/OT data-driven solutions	• The activity manufactures, develops, installs, deploys, maintains, repairs or provides professional services, including technical consulting for design or monitoring of specific software systems	• Electrification • Motion • Process Automation • Robotics & Discrete Automation
<b>5. SERVICES</b>		
5.1 Repair, refurbishment and remanufacturing	• Repair, refurbishment and remanufacturing of goods that have been used for their intended purpose before by a customer (physical person or legal person)	• Electrification • Motion • Process Automation • Robotics & Discrete Automation
5.2 Sale of spare parts	• Sale of spare parts	• Electrification • Motion • Robotics & Discrete Automation
5.3 Preparation for re-use of end-of-life products and product components	• Preparation for re-use of products and components at the end of life	• Motion
5.4 Sale of second-hand goods	• Sale of second-hand goods that have been used for their intended purpose before by a customer (physical person or legal person), possibly after repair, refurbishment or remanufacturing	• Motion

ABB's activities were mapped following the ABB product tree by business area, division, product group, product line and industry usage. Financial data was extracted from various management reporting tools and reconciled to our consolidated figures at the division or product group level, with the highest appropriate degree of granularity to subsequently assess the Substantial Contribution criteria.

In 2023 we reviewed and partially reassessed our 2022 eligible activity mapping based on the developments of the Taxonomy. Overall, the list of eligible activities is more extensive compared to 2022, as more activities relevant for ABB became covered by the amended Climate Delegated Act and the Environmental Delegated Act. In particular, the newly added activity 3.20 "Manufacture, installation, and servicing of high, medium and low voltage electrical equipment for electrical transmission and distribution" under the climate change mitigation objective had a direct relevance for ABB business activities and entailed a re-mapping of related activities.

Following the eligibility assessment, the alignment of all qualifying activities with the Substantial Contribution (SC) criteria specified in the respective Delegated Acts was analyzed. This assessment was completed for our products, our real estate, our fleet and R&D activities at the Group, business area, business division, and site levels.

The eligible activities that were newly released in 2023 will be assessed for alignment in FY 2024, as foreseen by the EU Taxonomy Regulation.

In 2023, ABB made a substantial contribution to climate change mitigation to the following activities:

- 3.1 Manufacture of renewable energy technologies,
- 3.3 Manufacture of low-carbon technologies for transport,
- 3.4 Manufacture of batteries,
- 3.5 Manufacture of energy efficiency equipment for buildings,
- 4.9 Transmission and distribution of electricity,
- 6.5 Transport by motorbikes, passenger cars and light commercial vehicles,
- 6.14 Infrastructure for rail transport,

- 6.15 Infrastructure enabling low-carbon road transport and public transport,
- 6.16 Infrastructure enabling low-carbon water transport,
- 7.2 Renovation of existing buildings,
- 7.3 Installation, maintenance and repair of energy efficiency equipment,
- 7.4 Installation, maintenance and repair of charging stations for electric vehicles in buildings,
- 7.5 Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings,
- 7.6 Installation, maintenance and repair of renewable energy technologies, and
- 7.7 Acquisition and ownership of buildings.

#### **Do no significant harm (DNSH)**

The DNSH criteria were analyzed for economic activities where ABB meets the Substantial Contribution condition as listed above. Depending on the relevant environmental objective under which a certain activity is reported, ABB used a structured assessment to document its compliance with the DNSH criteria for the other five environmental objectives. Based on the DNSH criteria for the relevant economic activities, our assessment was carried out at the activity, company, and site levels. For site-specific criteria, we focused our analysis on sites that produce products meeting the substantial contribution criteria.

Compared to last year, several generic and activity-specific DNSH criteria were expanded or amended by the new Delegated Acts, which we took into account in our assessment.

Below, we set out our interpretation and describe the main analyses conducted. The assessments confirm that we meet the requirements of the DNSH criteria.

#### **1. Climate change adaptation**

We conducted a screening of the relevant physical climate risks and performed an initial climate risk and vulnerability assessment to identify which manufacturing sites may be affected by physical climate risks during their expected lifetimes. The climate risk and vulnerability analyses were based on Representative Concentration Pathway (RCP) scenarios 4.5 and 8.5 up to the year 2052. Furthermore, we assessed the relevance of identified climate risks on the economic activity and potential adaptation solutions that could reduce identified risks.

#### **2. Sustainable use and protection of water and marine resources**

We assessed our activities for relevant sites regarding the sustainable use and protection of water and marine resources by measuring the fulfillment of requirements for water quality preservation, water stress avoidance and water impact assessment. Furthermore, the generic criteria were expanded in 2023 to include potential impacts on marine waters. Our sites within this scope are certified according to ISO 14001 Environmental Management Systems and ISO 9001 Quality Management Systems or provided other documentation which served as a basis for our assessment, supplemented by additional external data sources.

Where activity-specific DNSH criteria exist, we have assessed compliance on an activity basis. For example, the amended Climate Delegated Act has broadened water protection criteria for the Activity 6.16 Infrastructure enabling low-carbon water transport. Applicability of these criteria was assessed based on the nature of ABB's activities and products and associated impacts.

#### **3. Transition to a circular economy**

To help preserve the Earth's resources for future generations, ABB takes a company-wide approach to circularity.

We leverage the ABB Circularity Approach to meet the requirements of DNSH. By 2030, at least 80 percent of our products and solutions will be covered by our Circularity Approach and evaluated against a clear set of KPIs, corresponding to each stage of the product life cycle.

Certain requirements for construction and demolition waste specific for activities 6.14 and 6.16 are deemed not applicable to relevant ABB products, since this is not part of ABB operations.

#### 4. Pollution prevention and control

The DNSH criteria require that the economic activity does not lead to the production, placing on the market or use of chemical substances listed in a variety of EU chemical regulations and directives, such as EU Regulation 2019/1021 on Persistent Organic Pollutants, EU Directive 2011/65 on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (RoHS) or the EU Regulation 1907/2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). ABB has robust company-wide processes in place to ensure compliance with all applicable regulations.

With respect to the REACH-related requirements, we have noted new specifications concerning a minimum concentration limit for substances of very high concern, except if “no other suitable alternative substances” are available on the market. The relevant additional assessment and documentation required is not currently available, which for now prevents ABB from claiming compliance with these DNSH criteria for some of its products. ABB is committed to taking further steps to make the necessary documentation available.

Furthermore, in our assessment, we assume that the approved exemptions to the EU Directive on Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS) are valid also in the context of the DNSH. We understand that there are different positions in the industry on interpretation of this point, as the Taxonomy legal text leaves some unclarity. We have therefore opted for an approach adapted to business realities, as long as no official guidance to the opposite has been released.

#### 5. Protection and restoration of biodiversity and ecosystems

In order to verify adherence to the requirements for biodiversity and ecosystems, the relevant sites in or near biodiversity-sensitive or -protected areas were identified and analyzed in a structured screening process. The EU Natura 2000 network, UNESCO World Heritage sites, Key Biodiversity Areas, as well as other protected areas were considered. Most of our sites within this scope are certified according to ISO 14001 Environmental Management Systems and ISO 9001 Quality Management Systems, which provided the basis for our assessment, supplemented by additional external data sources.

Furthermore, our manufacturing sites operate strictly in line with valid permits. Our EU sites are already subject to relevant EU regulatory requirements relating to flora, fauna, and habitats, whereas the non-EU sites underwent a case-by-case evaluation, which considered relevant national legislation related to the conservation of habitats and species, as well as external environmental assessments.

#### Minimum safeguards

The minimum safeguards are based on Article 18 of the Taxonomy Regulation and drawn from principles expressed by the OECD, the UN, the Fundamental Conventions of the International Labour Organization and the International Bill of Human Rights.

ABB used a structured assessment to document its compliance with the minimum safeguards. The assessment considered the recommendations for the operationalization of the minimum safeguards as set forth in the Final Report on Minimum Safeguards from the EU Platform on Sustainable Finance (2022). Our assessment was carried out separately for nine guiding principles: policies, due diligence and risk assessment, addressing impacts and tracking remediation effectiveness, communication, grievance mechanisms, consumer interests, anti-corruption, competition, and taxation.

For further information, please refer to the chapters on Human rights and labor standards of this Sustainability Report.



### ABB financial and non-financial reporting

ABB prepares its consolidated financial statements in accordance with U.S. GAAP. The EU Taxonomy Regulation references the KPI disclosure in accordance with International Financial Reporting Standards (IFRS). For the accounting treatment of financial data required for the KPI disclosures, the two standards are largely converged, with the following exceptions:

- Non-order related research and development is expensed as incurred under U.S. GAAP and therefore has been reported as part of the Opex KPI, and
- Leases with a term of one year or less are expensed as incurred under U.S. GAAP and not capitalized; therefore, these have also been reported as part of our Opex KPI.

The remaining differences between revenue recognition, tangible and intangible assets, and leases are largely converged, and no material differences impacting the comparability of data would be expected.

The results of our assessment of the Taxonomy eligibility and alignment of our offerings are summarized below. As our Taxonomy alignment is being reported for the second time, figures and comparable information from 2022 are also provided.

The calculation of the KPIs for year-end 2023 was based on financial data as available on December 31, 2023.

#### Turnover KPI

The proportion of Taxonomy-eligible and/or -aligned turnover has been calculated as the part of net turnover derived from products and services associated with Taxonomy-eligible and/or -aligned economic activities (numerator) divided by net turnover (denominator) for the financial year ended December 31, 2023.

The denominator is the Group's net turnover as presented in the Consolidated Income Statements under the line item "Total revenues," in accordance with U.S. GAAP. To calculate the numerator, we used the activity mapping described above and identified all third-party revenues associated with the Taxonomy-eligible and/or -aligned activities. For the year ended December 31, 2023, 46% of ABB revenues were Taxonomy-eligible, and 6% of ABB revenues were Taxonomy-aligned under the objective of climate change mitigation (CCM), while 9% of ABB revenues were Taxonomy-eligible under the objective of transition to a circular economy (CE). In some instances, we disaggregated revenues by product as well as industry usage to identify the Taxonomy-eligible and aligned turnover. To avoid double-counting of those business activities that were mapped to several activities, we calculated and reported their contribution to only one economic activity.

In comparison, in 2022, 37% of ABB revenues were Taxonomy-eligible, and 10% of ABB revenues were Taxonomy-aligned.

Large parts of ABB's business activities are not directly covered by the Taxonomy's activities, although the new version of the Climate Delegated Act did extend more to our sector. In addition, the alignment assessment for the activities under the Environmental Delegated Act is still ongoing and will be finalized in 2024.

Against this background, the majority of our Taxonomy-eligible turnover is reported under:

- (i) Manufacture, installation, and servicing of high, medium, and low voltage electrical equipment for electrical transmission and distribution (CCM 3.20),
- (ii) Manufacture of electrical and electronic equipment (CE 1.2), and
- (iii) Other low-carbon technologies (CCM 3.6).

While the majority of our Taxonomy-aligned turnover is reported under:

- (i) Renewable energy technologies (CCM 3.1),
- (ii) Manufacture of low carbon technologies for transport (CCM 3.3), and
- (iii) Energy efficiency equipment for buildings (CCM 3.5).

## Taxonomy KPI disclosures

Activities CCM 3.20 and CE 1.2 were newly released in 2023 and only eligibility is required for reporting in financial year 2023, explaining why no alignment is reported this year.

Activity CCM 3.6 requires that the contribution to GHG emission reductions be measured using a life cycle GHG emission savings calculation that demonstrates the savings “compared to the best-performing alternative technology, product or solution available on the market”. For many of our significant electrical and industrial automation solutions, it was unclear how to define “the best-performing alternative” on the market, as such products are not widely available. The Substantial Contribution (SC) criteria need further clarification to determine what part of our electrical and industrial automation solutions can fulfill them. For now, this Activity CCM 3.6 was deemed not-aligned.

The increase of our Taxonomy-eligible turnover in 2023 compared to 2022 is reflecting the expansion of newly added activities and environmental objectives that match better our business focus.

The decrease in Taxonomy-aligned turnover between 2023 and 2022 is mainly due to the following reasons:

- (i) Reclassification of some our 2022 aligned business activities to newly released activities for which alignment is not required this year (for example, e-mobility),
- (ii) A decrease in the relative share of the turnover of business divisions and product groups that contribute to Taxonomy-aligned activities compared to ABB’s overall global turnover, and
- (iii) A change in the mix of industry applications of our product portfolio, which impacts our ability to meet certain alignment criteria (for example, the relative share of transport and buildings has declined in 2023).

The details of the turnover KPI and breakdowns are provided on pages 133-135 of the report.

#### **Capital expenditure (Capex) KPI**

The Capex KPI is defined as Taxonomy-eligible and/or -aligned Capex (numerator) divided by total Capex (denominator) for the financial year ended December 31, 2023. The total Capex used for the denominator includes total additions to tangible and intangible assets before depreciation, amortization and revaluations and impairments, as presented in Note 23 “Operating segment and geographic data” of the Consolidated Financial Statements, and from leases (finance and operating), as presented in Note 14 “Leases,” as well as assets acquired as part of business combinations, as presented in Note 4 “Acquisitions, divestments and equity-accounted companies.” Taxonomy-eligible and/or -aligned Capex used for the numerator includes Capex related to assets or processes that are associated with eligible or aligned activities, and Capex related to the purchase of output for eligible or aligned activities and individual measures. No “Capex plans” in line with the Taxonomy regulation were considered.

Within ABB, real estate initiatives and large investments are identified and analyzed on a case-by-case basis and mapped to the relevant activities at the business area and divisional levels. Capex KPI data collection is coordinated centrally. Investments have been reported under the activity with which the Capex is associated.

For the year ended December 31, 2023, 64% of ABB Capex are Taxonomy-eligible, and 8% of ABB Capex are Taxonomy-aligned under the objective of climate change mitigation. In comparison, in 2022, 64% of ABB Capex were Taxonomy-eligible, and 14% of ABB Capex were Taxonomy-aligned.

For all remaining expenditures we allocated Capex according to a factor based on the percentage of eligible and aligned revenue per business division. For example, if 10% of the division’s revenues were eligible, 10% of the remaining Capex not specifically mapped could be allocated to the activity associated with that revenue. By initially

mapping large projects and subsequently allocating the remaining Capex, we ensured there was no double counting of Capex KPIs.

Against this background, the majority of our Taxonomy-eligible Capex is reported under:

- (i) Acquisition and ownership of buildings (CCM 7.7),
- (ii) Manufacture, installation, and servicing of high, medium and low voltage electrical equipment for electrical transmission and distribution (CCM 3.20), and
- (iii) Transport by motorbikes, passenger cars and light commercial vehicles (CCM 6.5).

While the majority of our Taxonomy-aligned Capex is reported under:

- (i) Transport by motorbikes, passenger cars and light commercial vehicles (CCM 6.5),
- (ii) Acquisition and ownership of buildings (CCM 7.7), and
- (iii) Installation, maintenance and repair of energy efficiency equipment (CCM 7.3).

Acquisition and ownership of buildings (CCM 7.7) of ABB's real estate portfolio accounts for the biggest portion of Capex eligibility, with the share further increased as a result of reallocation from Activity 7.1. The main difference between Taxonomy-eligible and aligned Capex is mainly due to the following reasons:

- (i) Challenges in applying EU Energy Performance of Buildings Directive to ABB's global real estate portfolio outside of the EU,
- (ii) Limited availability of information on Energy Performance Certificates for our global assets, and
- (iii) Energy certificates not meeting the Substantial Contribution criteria for energy efficiency of buildings.

The real estate function carried out technical screenings on the largest investments within EU. As a result of this activity, the investments related to the new ABB campus in Mannheim proved to be Taxonomy-aligned thanks to the high energy performance of the building, which is designed for minimizing energy use and GHG emissions.

The difference between Taxonomy-aligned Capex 2023 and Taxonomy-aligned Capex 2022 is mainly driven by the decrease of aligned Business combination. We could not fully evaluate the Technical Screening Criteria of the business activities newly acquired in the last months of the year. The assessment of these new portfolio activities will be completed during 2024 and reflected in our Taxonomy Turnover, Capex and Opex for 2024.

The details of the Capex KPI and breakdowns are provided on pages 136-139 of the report.

#### **Operating expenditure (Opex) KPI**

The Opex KPI is defined as Taxonomy-eligible and/or -aligned Opex (numerator) divided by total Opex (denominator) for the financial year ended December 31, 2023.

Total Opex used for the denominator consists of direct non-capitalized costs related to R&D, short-term leases (less than 1 year), repairs and maintenance, building renovation projects, and any other direct expenditures associated with the day-to-day servicing of assets including property, plants and equipment. Direct costs for training and other human resource needs are not included in either the denominator or the numerator. R&D is based on the line item "Non-Order related Research & Development" in the Consolidated Income Statements. Other corresponding values can be derived from our internal reporting systems but are not directly reconcilable with the figures presented in the Consolidated Income Statements.

For the year ended December 31, 2023, 45% of Opex are Taxonomy-eligible and 6% of ABB's Opex are Taxonomy-aligned under the objective of climate change mitigation. In comparison, in 2022, 40% of Opex were Taxonomy-eligible and 11% of ABB's Opex were Taxonomy-aligned.

The Opex data aggregation was broken into two distinct processes. R&D was allocated to Taxonomy-eligible activities identified in the activity mapping phase described above. R&D managers working on projects not associated with Taxonomy-eligible activities but intended to substantially reduce GHG emissions assessed their eligibility using the criteria under Activity 9.1 “Close to market research, development and innovation” where appropriate. For the remaining Opex, allocation factors were applied to building renovation projects, maintenance and repair, and any other direct expenditures relating to the day-to-day servicing of real property assets, as well as short-term leases. These expenses were considered for each division and multiplied by the percentage of eligible and aligned revenue in that division. This approach was necessary due to a lack of more granular data on the same basis as described above for the Capex KPI. With this process, we ensured there was no double counting for the Opex KPI.

The majority of our Taxonomy-eligible Opex is reported under:

- (i) Manufacture, installation, and servicing of high, medium and low voltage electrical equipment for electrical transmission and distribution (CCM 3.20),
- (ii) Manufacture of electrical and electronic equipment (CE 1.2), and
- (iii) Energy efficiency equipment for buildings (CCM 3.5).

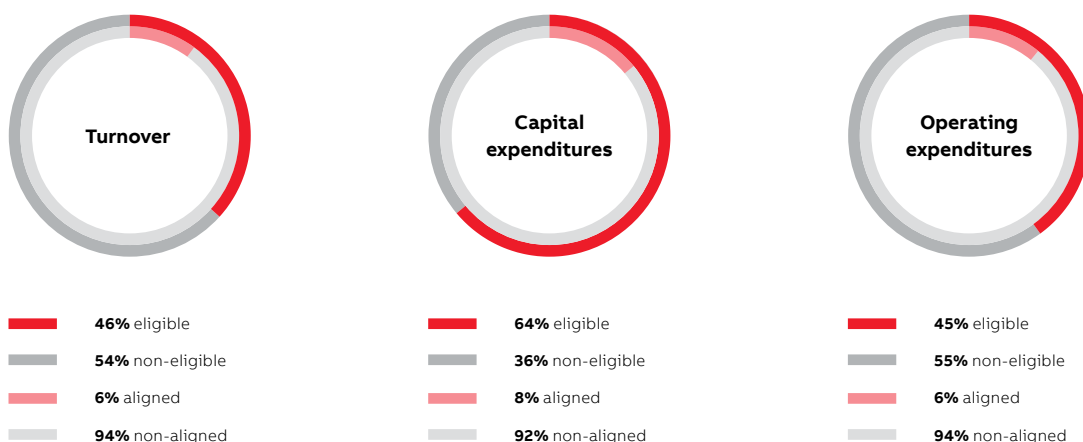
While the majority of our Taxonomy-aligned Opex is reported under:

- (i) Renewable energy technologies (CCM 3.1),
- (ii) Manufacture of low carbon technologies for transport (CCM 3.3), and
- (iii) Energy efficiency equipment for buildings (CCM 3.5).

The variation and difference of Taxonomy-eligible and aligned Opex between 2023 and 2022 are correlated with the Taxonomy-eligible and aligned turnover as Opex is mainly driven by the applied product group revenue allocation.

The details of the Opex KPI and breakdowns are provided on pages 140-142 of the report.

**2023 ABB ASSESSMENT RESULTS UNDER THE EU TAXONOMY: TURNOVER, CAPEX, OPEX KPIS**





## Next steps

This year was marked by the inclusion of new activities that can make a substantial contribution to climate change mitigation and adaptation and by the official adoption of the Environmental Delegated Act that focuses on the other four environmental objectives.

Following these latest Taxonomy developments, we have already carried out an eligibility assessment for the newly released activities. In 2024, we will focus on implementing the required processes and expertise to assess our compliance with the technical screening criteria, to fulfill alignment requirements for these activities.

Looking ahead, the financial year 2024 will mark the beginning of mandatory compliance with the Corporate Sustainability Reporting Directive (CSRD) and the European Sustainability Reporting Standards (ESRS). The CSRD and ESRS aim to standardize sustainability reporting and further increase linkages between financial and sustainability information, and the mandatory assurance for the ABB Group's sustainability reporting.

### Recommendations and way forward

To be effective, the EU Taxonomy needs to take account of all economic activities that play an important role in the transition to net zero. We therefore welcome the fact that the EU Taxonomy now takes more account of many critical technologies, such as electrical equipment, that are needed to enable a renewable energy system.

Nonetheless, we also see that there is still potential for a more consistent treatment and inclusion of major readily available technologies which can contribute to a more efficient management of electricity consumption, especially given that electrification lies at the core of the EU decarbonization strategy. In our view, equipment aimed at energy efficiency optimization and automation in industrial processes should be elevated to the level of a distinct enabling economic activity under the climate mitigation objective. We also believe that the role of maintenance activities should be better reflected in the context of circular economy, not only climate change mitigation.

We also believe that the existing EU legal framework is already well placed to set high quality standards for manufacturing processes. We therefore see no need for the EU Taxonomy to go beyond existing legal obligations for manufacturers.

In summary, we view the EU Taxonomy as a significant step forward in developing a common classification system for sustainable economic activities. We also understand how challenging this task is and that it remains a work in progress for some time in the future. At ABB, we are determined to further support the development of the EU Taxonomy, including through participation in the EU Taxonomy Stakeholder Request Mechanism, as every year of Taxonomy implementation brings a better understanding of this crucial legislation. Climate change is a global challenge that requires a global approach. The end goal should be a common global classification system for sustainable activities that is comprehensive, credible and relevant to the entire world. If the gaps in the EU Taxonomy are addressed, we believe that it has the potential to serve as a model for such a system, as well as an important driver of truly sustainable investments.

**ABB Group Economic activities 2023 in accordance with the EU Taxonomy**  
**EU Taxonomy – Turnover**

Financial year 2023	2023			Substantial contribution criteria						DNSH criteria (Does Not Significantly Harm)						Minimum Safeguards	Proportion of Taxonomy aligned (A.1.) or eligible (A.2.) Turnover, 2022	Category enabling activity	Category transitional activity
	Code(s)	Turnover	Proportion of Turnover, 2023	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity				
Economic activities	\$million	%	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E	T
<b>A. TAXONOMY- ELIGIBLE ACTIVITIES</b>																			
<b>A.1. ENVIRONMENTALLY SUSTAINABLE ACTIVITIES (TAXONOMY-ALIGNED)</b>																			
3.1 Manufacture of renewable energy technologies	CCM 3.1	717	2%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	4%	E	
3.3 Manufacture of low-carbon technologies for transport	CCM 3.3	491	2%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	2%	E	
3.4 Manufacture of batteries	CCM 3.4	88	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	
3.5 Manufacture of energy efficiency equipment for buildings	CCM 3.5	277	1%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	1%	E	
4.9 Transmission and distribution of electricity	CCM 4.9	<0.5	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	
6.14 Infrastructure for rail transport	CCM 6.14	162	1%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	
6.15 Infrastructure enabling low-carbon road transport and public transport	CCM 6.15	33	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	2%	E	
6.16 Infrastructure enabling low-carbon water transport	CCM 6.16	225	1%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	1%	E	
7.6 Installation, maintenance and repair of renewable energy technologies	CCM 7.6	<0.5	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	
<b>Turnover of environmentally sustainable activities (Taxonomy-aligned) (A.1)</b>		<b>1 994</b>	<b>6%</b>	<b>6%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>10%</b>		
<b>Of which Enabling</b>		<b>1 832</b>	<b>6%</b>	<b>6%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>10%</b>	<b>E</b>	
<b>Of which Transitional</b>		<b>0</b>	<b>0%</b>	<b>0%</b>						<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>0%</b>		<b>T</b>

Financial year 2023	2023			Substantial contribution criteria						DNSH criteria (Does Not Significantly Harm)									
Economic activities	Code(s)	Turnover	Proportion of Turnover, 2023	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Minimum Safeguards	Proportion of Taxonomy aligned (A.1.) or eligible (A.2.) Turnover, 2022	Category enabling activity	Category transitional activity
		\$million	%	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E	T
<b>A.2. TAXONOMY-ELIGIBLE BUT NOT ENVIRONMENTALLY SUSTAINABLE ACTIVITIES (NOT TAXONOMY-ALIGNED ACTIVITIES)</b>																			
				EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL										
3.1 Manufacture of renewable energy technologies	CCM 3.1	43	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
3.2 Equipment for the production and use of hydrogen	CCM 3.2	3	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
3.3 Manufacture of low-carbon technologies for transport	CCM 3.3	93	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								3%		
3.6 Manufacture of other low-carbon technologies	CCM 3.6	942	3%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								24%		
3.19 Manufacture of rail constituents	CCM 3.19	<0.5	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								N/A		
3.20 Manufacture, installation, and servicing of high, medium and low voltage electrical equipment for electrical transmission and distribution	CCM 3.20	8 755	27%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								N/A		
6.16 Infrastructure enabling low-carbon water transport	CCM 6.16	8	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
8.2 Data-driven solutions for GHG emissions reductions	CCM 8.2	115	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
1.2 Manufacture of electrical and electronic equipment	CE 1.2	1 692	5%	N/EL	N/EL	N/EL	N/EL	EL	N/EL								N/A		
4.1 Provision of IT/OT data-driven solutions and software	CE 4.1	35	0%	N/EL	N/EL	N/EL	N/EL	EL	N/EL								N/A		
5.1 Repair, refurbishment and remanufacturing	CE 5.1	464	1%	N/EL	N/EL	N/EL	N/EL	EL	N/EL								N/A		
5.2 Sale of spare-parts	CE 5.2	767	2%	N/EL	N/EL	N/EL	N/EL	EL	N/EL								N/A		

Financial year 2023	2023			Substantial contribution criteria						DNSH criteria (Does Not Significantly Harm)										
	Code(s)	Turnover	Proportion of Turnover, 2023	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Minimum Safeguards	Proportion of Taxonomy aligned (A.1.) or eligible (A.2.) Turnover, 2022	Category enabling activity	Category transitional activity	
Economic activities	\$million		%	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E	T	
5.3 Preparation of re-use of end-of-life products and product components	CE 5.3	<0.5	0%	N/EL	N/EL	N/EL	N/EL	EL	N/EL											N/A
5.4 Sale of second-hand goods	CE 5.4	<0.5	0%	N/EL	N/EL	N/EL	N/EL	EL	N/EL											N/A
<b>Turnover of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)</b>	<b>12 919</b>	<b>40%</b>	<b>31%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>9%</b>	<b>0%</b>											<b>27%</b>
<b>Total of Taxonomy eligible activities (A.1+A.2)</b>	<b>14 913</b>	<b>46%</b>	<b>37%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>9%</b>	<b>0%</b>											<b>37%</b>

**B. TAXONOMY-NON-ELIGIBLE ACTIVITIES**

Turnover of Taxonomy-non-eligible activities (B)	17 322	54%
<b>Total (A+B)</b>	<b>32 235</b>	<b>100%</b>

Due to rounding, numbers presented may not add to the totals provided.

**Substantial Contribution Criteria**

**Y – Yes**, Taxonomy eligible and Taxonomy-aligned activity with the relevant environmental objective  
**N – No**, Taxonomy eligible but not Taxonomy-aligned activity with the relevant environmental objective  
**N/EL – not eligible**, Taxonomy non-eligible activity for the relevant environmental objective  
**EL – eligible**, Taxonomy eligible activity for the relevant objective

**DNSH criteria**

**Y – DNSH criteria are met**  
**N – DNSH criteria are not met**

**Minimum Safeguards**

**Y – Minimum safeguards are met**  
**N – Minimum safeguards are not met**

**CCM**: Climate Change Mitigation  
**CCA**: Climate Change Adaptation  
**WTR**: Water and Marine Resources  
**CE**: Circular Economy  
**PPC**: Pollution Prevention and Control  
**BIO**: Biodiversity and ecosystems



ABB Group Economic activities 2023 in accordance with the EU Taxonomy  
EU Taxonomy – CAPEX

Financial year 2023	2023			Substantial contribution criteria						DNSH criteria (Does Not Significantly Harm)									
Economic activities	Code(s)	CapEx	Proportion of CapEx, 2023	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Minimum safeguards	Proportion of Taxonomy aligned (A.1.) or eligible (A.2.) CapEx, 2022	Category enabling activity	Category transitional activity
	\$million		%	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E	T

A. TAXONOMY-ELIGIBLE ACTIVITIES

A.1. ENVIRONMENTALLY SUSTAINABLE ACTIVITIES (TAXONOMY-ALIGNED)

3.1 Manufacture of renewable energy technologies	CCM 3.1	1	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	
3.3 Manufacture of low-carbon technologies for transport	CCM 3.3	9	1%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	1%	E	
3.4 Manufacture of batteries	CCM 3.4	<0.5	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	
3.5 Manufacture of energy efficiency equipment for buildings	CCM 3.5	1	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	
4.9 Transmission and distribution of electricity	CCM 4.9	<0.5	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	
6.5 Transport by motorbikes, passenger cars and light commercial vehicles	CCM 6.5	36	3%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	2%		T
6.14 Infrastructure for rail transport	CCM 6.14	<0.5	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%		
6.15 Infrastructure enabling low-carbon road transport and public transport	CCM 6.15	<0.5	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	10%	E	
6.16 Infrastructure enabling low-carbon water transport	CCM 6.16	<0.5	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	
7.2 Renovation of Existing Buildings	CCM 7.2	1	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%		T
7.3 Installation, maintenance and repair of energy efficiency equipment	CCM 7.3	11	1%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	
7.4 Installation, maintenance and repair of charging stations for electric vehicles in buildings (and parking spaces attached to buildings)	CCM 7.4	2	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	



Financial year 2023	2023			Substantial contribution criteria						DNSH criteria (Does Not Significantly Harm)									
Economic activities	Code(s)	CapEx	Proportion of CapEx, 2023	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Minimum safeguards	Proportion of Taxonomy aligned (A.1.) or eligible (A.2.) CapEx, 2022	Category enabling activity	Category transitional activity
	\$million		%	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E	T
4.9 Transmission and distribution of electricity	CCM 4.9	<0.5	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
6.5 Transport by motorbikes, passenger cars and light commercial vehicles	CCM 6.5	44	4%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								2%		
6.14 Infrastructure for rail transport	CCM 6.14	3	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
6.15 Infrastructure enabling low-carbon road transport and public transport	CCM 6.15	<0.5	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
6.16 Infrastructure enabling low-carbon water transport	CCM 6.16	2	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
7.1 Construction of new buildings	CCM 7.1	0	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								7%		
7.2 Renovation of Existing Buildings	CCM 7.2	24	2%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								1%		
7.3 Installation, maintenance and repair of energy efficiency equipment	CCM 7.3	3	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								1%		
7.4 Installation, maintenance and repair of charging stations for electric vehicles in buildings	CCM 7.4	1	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
7.5 Installation, maintenance and repair of instruments and devices for measuring, regulation and controlling energy performance of buildings	CCM 7.5	<0.5	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
7.6 Installation, maintenance and repair of renewable energy technologies	CCM 7.6	2	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
7.7 Acquisition and ownership of buildings	CCM 7.7	267	22%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								23%		
8.2 Data-driven solutions for GHG emissions reductions	CCM 8.2	1	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
1.2 Manufacture of electrical and electronic equipment	CE 1.2	26	2%	N/EL	N/EL	N/EL	N/EL	EL	N/EL								N/A		

Financial year 2023	2023			Substantial contribution criteria						DNSH criteria (Does Not Significantly Harm)										
	Code(s)	CapEx	Proportion of CapEx, 2023	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Minimum safeguards	Proportion of Taxonomy aligned (A.1.) or eligible (A.2.) CapEx, 2022	Category enabling activity	Category transitional activity	
Economic activities	\$million		%	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E	T	
4.1 Provision of IT/OT data-driven solutions and software	CE 4.1	<0.5	0%	N/EL	N/EL	N/EL	N/EL	EL	N/EL											N/A
5.1 Repair, refurbishment and remanufacturing	CE 5.1	5	0%	N/EL	N/EL	N/EL	N/EL	EL	N/EL											N/A
5.2 Sale of spare-parts	CE 5.2	8	1%	N/EL	N/EL	N/EL	N/EL	EL	N/EL											N/A
5.3 Preparation of re-use of end-of-life products and product components	CE 5.3	<0.5	0%	N/EL	N/EL	N/EL	N/EL	EL	N/EL											N/A
5.4 Sale of second-hand goods	CE 5.4	<0.5	0%	N/EL	N/EL	N/EL	N/EL	EL	N/EL											N/A
<b>CapEx of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)</b>		<b>680</b>	<b>56%</b>	<b>53%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>3%</b>	<b>0%</b>											<b>50%</b>
<b>Total CapEx of Taxonomy eligible activities (A.1+A.2)</b>		<b>772</b>	<b>64%</b>	<b>61%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>3%</b>	<b>0%</b>											<b>64%</b>

**B. TAXONOMY-NON-ELIGIBLE ACTIVITIES**

CapEx of Taxonomy-non-eligible activities (B)	436	36%
<b>Total (A+B)</b>	<b>1 208</b>	<b>100%</b>

Due to rounding, numbers presented may not add to the totals provided.



ABB Group Economic activities 2023 in accordance with the EU Taxonomy  
EU Taxonomy – OPEX

Financial year 2023	2023			Substantial contribution criteria						DNSH criteria (Does Not Significantly Harm)									
Economic activities	Code(s)	OpEx	Proportion of OpEx, 2023	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Minimum Safeguards	Proportion of Taxonomy aligned (A.1.) or eligible (A.2.) OpEx, 2022	Category enabling activity	Category transitional activity
		\$million	%	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E	T
<b>A. TAXONOMY-ELIGIBLE ACTIVITIES</b>																			
<b>A.1. ENVIRONMENTALLY SUSTAINABLE ACTIVITIES (TAXONOMY-ALIGNED)</b>																			
3.1 Manufacture of renewable energy technologies	CCM 3.1	39	2%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	4%	E	
3.3 Manufacture of low-carbon technologies for transport	CCM 3.3	25	1%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	
3.4 Manufacture of batteries	CCM 3.4	10	1%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	
3.5 Manufacture of energy efficiency equipment for buildings	CCM 3.5	15	1%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	2%	E	
4.9 Transmission and distribution of electricity	CCM 4.9	<0.5	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	
6.14 Infrastructure for rail transport	CCM 6.14	10	1%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%		
6.15 Infrastructure enabling low-carbon road transport and public transport	CCM 6.15	1	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	5%	E	
6.16 Infrastructure enabling low-carbon water transport	CCM 6.16	3	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	
7.6 Installation, maintenance and repair of renewable energy technologies	CCM 7.6	<0.5	0%	Y	N/EL	N/EL	N/EL	N/EL	N/EL	Y	Y	Y	Y	Y	Y	Y	0%	E	
<b>OpEx of environmental sustainable activities (Taxonomy-aligned activities) (A.1)</b>		<b>103</b>	<b>6%</b>	<b>6%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>11%</b>		
<b>Of which Enabling</b>		<b>94</b>	<b>5%</b>	<b>5%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>11%</b>	<b>E</b>	
<b>Of which Transitional</b>		<b>0</b>	<b>0%</b>	<b>0%</b>						<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>Y</b>	<b>0%</b>		<b>T</b>

Financial year 2023	2023			Substantial contribution criteria						DNSH criteria (Does Not Significantly Harm)									
Economic activities	Code(s)	OpEx	Proportion of OpEx, 2023	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Minimum Safeguards	Proportion of Taxonomy aligned (A.1.) or eligible (A.2.) OpEx, 2022	Category enabling activity	Category transitional activity
	\$million		%	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E	T
<b>A.2. TAXONOMY-ELIGIBLE BUT NOT ENVIRONMENTALLY SUSTAINABLE ACTIVITIES (NOT TAXONOMY-ALIGNED ACTIVITIES)</b>																			
				EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL	EL; N/EL										
3.1 Manufacture of renewable energy technologies	CCM 3.1	11	1%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
3.2 Equipment for the production and use of hydrogen	CCM 3.2	3	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
3.3 Manufacture of low carbon technologies for transport	CCM 3.3	10	1%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								2%		
3.5 Manufacture of energy efficiency equipment for buildings	CCM 3.5	38	2%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								1%		
3.6 Manufacture of other low-carbon technologies	CCM 3.6	21	1%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								22%		
3.19 Manufacture of rail constituents	CCM 3.19	<0.5	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								N/A		
3.20 Manufacture, installation, and servicing of high, medium and low voltage electrical equipment for electrical transmission and distribution	CCM 3.20	469	26%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								N/A		
6.14 Infrastructure for rail transport	CCM 6.14	<0.5	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
6.15 Infrastructure enabling low-carbon road transport and public transport	CCM 6.15	0	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								1%		
6.16 Infrastructure enabling low-carbon water transport	CCM 6.16	<0.5	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
7.7 Acquisition and ownership of buildings	CCM 7.7	2	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								0%		
8.2 Data-driven solutions for GHG emissions reductions	CCM 8.2	16	1%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								1%		
9.1 Close to market research, development and innovation	CCM 9.1	2	0%	EL	N/EL	N/EL	N/EL	N/EL	N/EL								1%		
1.2 Manufacture of electrical and electronic equipment	CE 1.2	99	5%	N/EL	N/EL	N/EL	N/EL	EL	N/EL								N/A		
4.1 Provision of IT/OT data-driven solutions and software	CE 4.1	34	2%	N/EL	N/EL	N/EL	N/EL	EL	N/EL								N/A		

Financial year 2023	2023			Substantial contribution criteria						DNSH criteria (Does Not Significantly Harm)									
Economic activities	Code(s)	OpEx	Proportion of OpEx, 2023	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Climate Change Mitigation	Climate Change Adaptation	Water	Pollution	Circular Economy	Biodiversity	Minimum Safeguards	Proportion of Taxonomy aligned (A.1.) or eligible (A.2.) OpEx, 2022	Category enabling activity	Category transitional activity
	\$million		%	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y;N;N/EL	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N	%	E	T
5.1 Repair, refurbishment and remanufacturing	CE 5.1	13	1%	N/EL	N/EL	N/EL	N/EL	EL	N/EL										N/A
5.2 Sale of spare-parts	CE 5.2	9	0%	N/EL	N/EL	N/EL	N/EL	EL	N/EL										N/A
5.3 Preparation of re-use of end-of-life products and product components	CE 5.3	<0.5	0%	N/EL	N/EL	N/EL	N/EL	EL	N/EL										N/A
5.4 Sale of second-hand goods	CE 5.4	<0.5	0%	N/EL	N/EL	N/EL	N/EL	EL	N/EL										N/A
<b>OpEx of Taxonomy-eligible but not environmentally sustainable activities (not Taxonomy-aligned activities) (A.2)</b>		<b>725</b>	<b>39%</b>	<b>31%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>8%</b>	<b>0%</b>										<b>29%</b>
<b>Total OpEx of Taxonomy eligible activities (A.1+A.2)</b>		<b>829</b>	<b>45%</b>	<b>37%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>8%</b>	<b>0%</b>										<b>40%</b>

**B. TAXONOMY-NON-ELIGIBLE ACTIVITIES**

OpEx of Taxonomy-non-eligible activities (B)	1 011	55%
<b>Total (A+B)</b>	<b>1 839</b>	<b>100%</b>

Due to rounding, numbers presented may not add to the totals provided.

# TCFD recommendations report

## Climate-related governance

ABB's Board of Directors reviews and approves the Sustainability Agenda and related targets, including climate targets. The Governance and Nomination Committee (GNC) is responsible for overseeing ABB's Sustainability Agenda (including corporate social responsibility, health, safety, and environment). The Compensation Committee ensures that ABB's executive compensation policies are appropriately aligned with its Sustainability Agenda. The business and sustainability expertise and experience of our Board members enables them to apply the right judgement and make informed decisions about sustainability and climate matters (see also competence matrix in the chapter "Corporate Governance summary").

The ABB Group Executive Committee validates the Sustainability Agenda and its implementation. It is responsible for reviewing strategic targets, including climate-related targets as well as for ensuring that a sustainability culture is embedded in our business decision making. This includes both assessing and managing climate-related risks and opportunities. Topics related to the Sustainability Agenda were discussed in each Executive Committee meeting held in 2023. The Chief Communications and Sustainability Officer, who is a member of the Executive Committee, holds functional responsibility for sustainability and reports together with the Group Head of Sustainability to the GNC on topics and progress related to the Sustainability Agenda.

The Sustainability Council is the operational body that oversees implementation of the Sustainability Agenda, reviews developments and monitors progress toward targets, including climate targets. As of 2023, all business areas are represented in the Sustainability Council by their heads of strategy as well as by their respective sustainability leads. This has further strengthened the role of the Sustainability Council.

For more details on ABB's sustainability governance, please refer to the chapter "Sustainability governance".

## Climate-related strategy

We continuously identify, monitor, and manage climate-related risks and opportunities over the short-term (1 year), medium-term (2–5 years), and long-term (5–30 years). They fall into two major categories: risks related to the physical impacts of climate change, and risks related to the transition toward a low-carbon economy, which are already present to some extent. As global temperatures rise, acute physical risks are more likely to occur and may become more severe. Additionally, new risks may emerge. Long-term climate risks and opportunities are assessed in our analyses of science-based climate and emissions scenarios. These analyses help us understand how our global emissions in our value chain must progress in the period up to 2050. They serve as a basis for assessing options and costs, as well as for setting long-term targets.

### Physical risks

Physical risks are direct effects from climate change and can result in extreme weather events, such as hurricanes or floods or in long-term chronic climate conditions like sustained higher temperatures leading to rising sea levels or more severe heat waves. These risks can have financial implications through damage to assets, reduced availability of resources or disruption of operations and supply chains.

For example, ABB sites around the world are vulnerable to water-related incidents caused by extreme weather events, such as flooding from heavy rain, storms, or



hurricanes. These events may result in disturbances or interrupt production for several months at a time and can also affect our supply chain. If the production of key suppliers is interrupted, as has happened in the past due to severe flooding in South-East Asia, our own production and revenues may be impacted. Upstream risks related to climate change are business continuity risks that are typically part of the ongoing dialogue that ABB has with its suppliers.

#### **Transitional risks**

As the world endeavors to transition towards a lower-carbon economy, the growing challenge of climate change may result in significant changes to the external environment in which we operate. Measures taken to mitigate and adapt to climate change could lead to substantial policy, legal, technological, and market changes that may impact our financial position, strategic decisions, and the way we operate.

An example of emerging regulation would be carbon pricing mechanisms. Currently, ABB is already paying carbon taxes in several countries, particularly in Europe, and carbon tax legislation, as well as the carbon price, are likely to increase in the coming years. The higher our scope 1 emissions, the more carbon tax we pay. Therefore, reducing our GHG emissions is not only good for the environment, but also for our business.

#### **Climate-related opportunities**

Climate change can also represent opportunities for growth, improvements, and value creation. With our purpose, strategy and operating model, we believe that ABB is best positioned to help the world mitigate and adapt to climate change and create financial value at the same time. By increasing energy efficiency, switching to renewable energy sources and moving toward circular business models, we are able to reduce costs and improve resilience even in times of crisis. With our leading technologies, we can make an even bigger impact in our customers' operations. By helping them reduce energy and resource consumption and avoid emissions, we make them more sustainable while driving further demand for our products, solutions and services.

To help our customers reduce GHG emissions, we have identified products and solutions from our portfolio that deliver emissions reductions. These include energy-efficient electric motors and drives and advanced automation, digital and electrification solutions for energy-intensive industries. As many customers lack expertise in energy management, ABB offers an end-to-end approach and a one-stop-shop for building automation and smart energy management solutions. These include the ABB Ability™ Building Ecosystem, NeoGear low-voltage switchgear solutions and the ABB Ability™ Energy and Asset Manager. Crucially, we also support the energy transition with technologies that integrate power from intermittent renewable sources into the electricity grid. For ABB, this represents a significant opportunity in both the short and medium terms.

We assess the impact of climate-related risks on ABB and its value chain and what they could mean in terms of financial costs, as well as how we can mitigate them. At the same time, we also consider the opportunities that such risks create for us as a business to drive value creation. The identification of climate-related business impacts and effects are also part of our strategic planning process, as ABB has clearly identified climate change as a long-term, global challenge that requires low-carbon, high efficiency solutions. Our business strategy is supported by our long-term commitment to innovation and technology leadership in areas such as high-efficiency electrification, automation and control systems, robotics and motion solutions, and technologies to capture the full potential of renewable energies. Through our Sustainability Agenda and by joining the "Business Ambition for 1.5°C" pledge, we are committed to achieving net-zero value chain GHG emissions by 2050 in line with the SBTi Net-Zero Standard.

We can significantly contribute towards a low-carbon society through our products, systems and services that help our customers reduce GHG emissions. The related

market opportunities, which include smart building solutions, urban infrastructure, clean energy, energy efficiency and mobility systems, are projected to be worth more than \$4.7 trillion in 2030 (IEA World Energy Outlook 2023).

The following table provides an overview of some of the main risks and opportunities that we have identified through our risk management processes (see more under “Risk and opportunity management”), what they mean for us and how we deal with them:

Category	Where it impacts our value chain	Time horizon	Likelihood	Severity <sup>1</sup>	(Potential) Impact	Measures taken
<b>RISKS</b>						
<b>PHYSICAL</b>						
Acute						
Flood, Storms	Direct operations	Near-term	Likely	Medium	Flooding can damage ABB’s physical infrastructure, disrupt logistics and the supply chain, and decreased production capacity, resulting in reduced revenue.	Comprehensive emergency response plan including contingencies for potential flood and storm events, regular maintenance of critical infrastructure, investment in resilient infrastructure and equipment, awareness measures for employees.
Chronic						
Increasing heat and precipitation Stresses	Direct operations	Long-term (emerging)	More Likely than not	Medium	This could result in higher water risks, production capacity disruptions, and increased exposure to extreme weather events caused by rainfall variability and water scarcity in certain regions.	While the majority of our manufacturing processes are not water-intensive, we work on improving water management practices to reduce water consumption, minimize water risks, and maintain business continuity as well as enhancing resilience by diversifying suppliers and identifying alternative transportation routes.
<b>TRANSITIONAL</b>						
Policy and legal risk						
Carbon pricing	Direct operations	Medium-term (emerging)	Likely	Medium	Increased direct costs	Investments in energy efficiency and emission reduction
Market risk						
Supply chain disruption	Direct operations/ Upstream	Medium-term (emerging)	Likely	Medium	Based on the geographic location of our suppliers, commodity risk exists, which can result in a limited supply of products or increased purchase prices.	We proactively identify, assess and address sustainability issues at our high-risk suppliers through our SSBM.
Reputation risk						
Stakeholder expectations	Direct operations	Medium-term (emerging)	Low	Medium	Loss of reputation if we fail to meet climate-related regulations or stakeholder expectations.	Our Purpose, strategy and operating model help us build a sustainable business. We directly engage with our stakeholders, build partnerships and actively support and disclose transparently according to climate related initiatives, such as TCFD and CDP.
<b>OPPORTUNITIES</b>						
Products and services						
Low emission goods and services	Downstream	Medium-term (current/emerging)	Certain	High	Increased revenues resulting from increased demand for products and services	R&D investments in offerings that help customers reduce GHG emissions
Carbon pricing	Downstream	Medium-term (emerging)	Likely	High	Customers facing increased costs due to carbon pricing are keen to reduce their GHG emissions by buying and using our offering.	R&D investments in offerings that help customers reduce GHG emissions

Category	Where it impacts our value chain	Time horizon	Likelihood	Severity <sup>1</sup>	(Potential) Impact	Measures taken
Resource efficiency						
Energy and emissions reduction	Direct operations	Short-term (current)	Certain	Medium	Reduced direct costs	Investments in energy efficiency measures in our own operations (e.g., HVAC systems, energy efficient lighting, compressed air systems, building improvements, specific manufacturing process improvements).
Energy source						
Shifting towards renewable energy sources	Direct operations	Medium-term (current)	Certain volatility	Medium costs, increased	Reduced costs stability in energy supply	Investments in onsite Solar PV will lead to cost reductions. Renewable sourcing will reduce emissions.
Markets and technology						
Transition to a lower-carbon economy	Direct operations	Short to long-term (current/emerging)	Certain	High	Matching our customer offering with market and technology trends	Technology development related to climate change is a big opportunity for ABB. Examples are electric motors and drives for the highest energy efficiency in line with Ecodesign Regulation (EU 2019/1781) or the rapid development of EV-charging for electric vehicles, as the road transport sector is shifting away from fossil fuels.

<sup>1</sup> Scale: low, medium, high.

In addition to the assessment of our current exposure to natural hazards, we reviewed 3 RCP (Representative Concentration Pathway) scenarios of the IPCC (Intergovernmental Panel on Climate Change) to inform our understanding of physical risks linked to our operations and to our 2030 sustainability strategy. In particular, RCP 2.6, 4.5 and 8.5 were reviewed for a time horizon of up to 30 years. We used a high-resolution risk tool of a major reinsurer to assess 328 sites that are considered of critical importance to our worldwide operations. The sites in scope cover the four main business areas in varying proportions and are located in 59 countries represented by manufacturing and non-manufacturing sites distributed over all the continents.

The tool provides data modeling and analysis at location level covering 19 sub-perils. The risk is identified based on physics-based hazard modelling, historical events insurance claims, geographical conditions, and climatic parameters, in addition to factoring the potential climate change influence on the increasing frequency and severity of natural hazards in future scenarios.

The table above depicts the results of the assessment based on the RCP4.5 scenario, in which we can expect a moderate increase in global temperatures, changes in precipitation patterns, and a rise in sea levels, which may still cause significant impacts to our business. However, the impacts are likely to be less severe than under scenarios of higher greenhouse gas emissions, such as RCP8.5.

The findings in the above table illustrated a consistent pattern of increased risk under different scenarios, such as floods and storms in the short-term. Long-term risks included rising temperatures and precipitation. Our analysis indicates that the hazards identified are expected to have a “Medium” impact under the RCP4.5 scenario. However, it is important to note that the severity of these hazards may increase under the more extreme RCP8.5 scenario.

At ABB, these risks could lead to infrastructure damage, logistical disruptions, and supply chain interruptions, resulting in decreased production capacity and reduced revenue in the short and medium-term. In the long-term, higher water risks, production capacity disruptions, and increased exposure to extreme weather events, caused by rainfall variability and water scarcity, may also impact revenue streams.

To safeguard our operations against flood and storm damage for short- and medium-term risks, we conducted a thorough risk assessment to identify vulnerable facilities and developed a comprehensive emergency response plan that includes contingencies for potential events. We invest in resilient infrastructure and perform regular maintenance of critical equipment. To ensure employee safety, we educate them on the risks of flood and storm damage and how to respond in emergency situations. These measures guarantee business continuity and minimize the impact of flood and storms on our operations.

Our sites are prepared for emergencies to keep our people safe and maintain business continuity. These analyses feed into our business continuity plans and preparations. For example, we use the World Resources Institute's (WRI) Aqueduct global water risk tool to assess our facilities according to the level of baseline water stress of the local watershed. Of the 338 ABB locations mapped in 2023, 61 face an extremely high level of water stress, 55 face a high level and 47 face a medium-to-high level of water stress. The tool not only helps us assess water stress at our sites, but also the levels of groundwater depletion, flood risk and seasonal variability of water availability at our sites, which is extremely useful for our work in managing water risk.

ABB has also used different scenarios to understand the speed at which we need to decarbonize our own operations to be in line with scientific estimates. This helped us set science-based targets in line with the 1.5°C trajectory of the Paris Agreement, in which ABB commits to reduce absolute scope 1 and 2 GHG emissions by at least 80 percent between 2019 and 2030 and a 90% Scope 1, 2 and 3 reductions by 2050 versus 2022.

Many of ABB's technologies directly address the causes of climate change, and our market opportunity and value proposition assessments and product/systems development roadmaps rely directly or indirectly on climate-related scenario analyses and expectations linked to climate-related policy and standards development. For longer-term trends, the analysis shows that ABB is well positioned in very attractive markets. We will further intensify our work on climate risk modelling in the coming year to be able to provide an even more comprehensive analysis including financial quantification of risks and opportunities.

ABB includes climate-related risks in its company-wide Enterprise Risk Management (ERM) process. This holistic risk management process supports the identification, assessment and mitigation of climate-related risks and considers their potential negative impact for us in achieving our business objectives and creating value. Climate risks are also considered in terms of their potential effects on our suppliers and customers across the value chain.

ABB has well-developed emergency response programs to manage potential impacts from climate change, such as storms, floods or threats to the water supply. These include, for example, ABB's facility and workplace emergency preparedness, protocols for unexpected emergencies and ABB's mandatory business continuity plans for our sites. Our Insurance Risk Management function works closely with our global insurance providers to identify risks to our assets and operations. Reviews of facilities are conducted annually or biennially, depending on the value of the asset. Incentive and penalty programs are in place to promote the implementation of best practices and risk mitigation and avoidance recommendations. All facilities are required to develop, implement, and test business continuity plans.

Our risk management approach also covers upstream business continuity risks related to climate change, such as extreme weather conditions affecting our suppliers.

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## Climate risk management



This includes comprehensive monitoring and development of our supply base to ensure sustainability, both in terms of materials and processes used and is typically part of the ongoing dialogue that ABB has with its suppliers.

We operate a worldwide supply chain management network with employees dedicated to this function in our business areas, divisions and in key countries. Upstream climate change risks and opportunities are also considered and analyzed in our assessment of upstream scope 3 emissions, where we identify the climate impact of all relevant scope 3 categories. With our Sustainable Supply Base Management (SSBM) program, we have a comprehensive approach in place, which includes surveillance of the sustainability performance of our suppliers. It involves supplier screening, training, on-site assessment, monitoring, and follow-up until all identified non-conformities are closed. We aim to address sustainability topics and performance at each stage of supplier life cycle management as part of our “beyond audit” approach and have at least 80 percent of our supply spend in focus countries covered by SSBM by 2030.

For mitigating transitional risks linked to our exposure to current and potential carbon taxes, as well as realizing opportunities linked to cost savings, we invest in energy efficiency and emissions reductions throughout our operations. We have committed to electrifying our fleet of more than 10,000 vehicles by 2030 and to continue deploying energy management systems at the company’s sites.

Our substantial annual investments in energy efficiency and emissions reduction projects frequently come along with favorable break-even times. This includes investments in low-carbon energy sources, compressed air systems, heating, ventilation and cooling systems. The largest part of the investment has been made in energy-efficient lighting.

We are raising our ambitions regarding our existing science-based targets by setting net-zero targets aligned with the SBTi Net-Zero Standard. In 2023, we submitted our updated scope 1, 2 and 3 targets for 2030 and 2050 to the Science Based Targets initiative for validation.

By 2030, we will reduce our own emissions by at least 80 percent and work with our customers and suppliers to reduce our scope 3 emissions by 25%. By 2050 we will reduce scope 1 and 2 emissions by 100% (versus 2019), and scope 3 emissions by 90% (versus 2022).

By 2030, we aim to cover at least 80 percent of ABB’s portfolio of products and solutions with a Circularity Approach and send zero waste to landfill, while taking measures to prevent waste generation.

We track our scope 1, 2 and 3 emissions, as well as waste generation and water withdrawal, especially from water-stressed areas.

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## Climate-related metrics and targets

# SASB disclosure table

<b>SASB – Electrical &amp; Electronic Equipment</b>				
<b>Topic</b>	<b>Metric</b>	<b>Unit of Measure</b>	<b>Code</b>	<b>ABB answer 2023</b>
Energy Management	a. Total Energy Consumed	Gigajoules (GJ),	RT-EE-130a.1	4672043 GJ
	b. Percentage Grid Electricity	Percentage (%)		63.5%
	c. Percentage Renewable			64%
Hazardous Waste Management	a. Amount of hazardous waste generated, percentage recycled	Metric tons (t), Percentage (%)	RT-EE-150a.1	5,321 metric tons; 40%
	b. Number and aggregate quantity of reportable spills, quantity recovered	Number, Kilogrammes (kg)	RT-EE-150a.2	1 spill, 350 liters of oil, not recovered.
Product Safety	a. Number of recalls issued, total units recalled	Number	RT-EE-250a.1	As of 2023, this number is not available on an aggregated level at ABB.
	b. Total amount of monetary losses as a result of legal proceedings associated with product safety	Presentation currency	RT-EE-250a.2	Not applicable. Due to NDA agreements with third parties, we are unable to disclose monetary values resulting from legal proceedings with these third parties.
Product Lifecycle Management	a. Percentage of products by revenue that contain IEC 62474 declarable substances	Percentage (%) by revenue	RT-EE-410a.1	As of 2023, we are unable to respond to this question. Please refer to the section “Circularity” in the Sustainability Report 2023.
	b. Percentage of eligible products, by revenue, certified to an energy efficiency certification	Percentage (%) by revenue	RT-EE-410a.2	Only applicable to North America products. All ABB products are included in point c.
	c. Revenue from renewable energy related and energy efficiency related products	Presentation currency	RT-EE-410a.3	Using the EU taxonomy as reference: In 2023, ABB reached a 6% Taxonomy-aligned revenue under the Climate Change Mitigation environmental objective that covers partially this requirement. For further details please refer to ABB's EU Taxonomy disclosures in the Sustainability Report 2023.
Materials sourcing	a. Description of the management risks associated with the use of critical materials	N/A	RT-EE-440a.1	Please refer to the sections “Circularity” and “Responsible sourcing” in the Sustainability Report 2023.
Business ethics	Description of policies and practices for prevention of:			
	a. Corruption and bribery and anti-competitive behaviour	N/A	RT-EE-510a.1	Please refer to the section “Integrity and transparency” in the Sustainability and Integrated Reports 2023.
	b. Total amount of monetary losses as a result of legal proceedings associated with bribery or corruption	Presentation currency	RT-EE-510a.2	Nil in 2023 (subject to any pending resolution with German authorities and the meaning of this question).
	c. Total amount of monetary losses as a result of legal proceedings associated with anti-competitive behaviour regulations	Presentation currency	RT-EE-510a.3	We are unable to disclose monetary values resulting from legal proceedings associated with anti-competitive behavior regulations.
Activity Metrics	a. Number of units produced (Production should be disclosed as number of units produced by product category, where relevant product categories include energy generation, energy delivery, and lighting and indoor climate control electronics.)	Number	RT-EE-000.A	Please refer to the section “Analysis of results of operations” in the Financial Report 2023.
	b. Number of Employees	Number	RT-EE-000.B	110,442

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# Definitions

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## Greenhouse gas emissions

GHG emissions refer to all emissions that have a warming effect on the earth's surface by trapping heat in the atmosphere. Carbon dioxide (CO<sub>2</sub>) makes up the vast majority of GHG emissions, but other gases, including methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O) and sulfur hexafluoride (SF<sub>6</sub>), also have a warming effect. CO<sub>2</sub>, methane and nitrous oxide are released during the combustion of fossil fuels, such as coal, oil and natural gas, to produce energy. At ABB, we use the metric of CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) to calculate our GHG emissions and to measure progress toward our emissions reduction targets.

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## Scope 1 GHG emissions

Direct emissions from company-owned and controlled resources, for example, emissions from combustion in owned or controlled boilers, furnaces, vehicles.

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## Scope 2 GHG emissions

Indirect emissions from the generation of purchased energy (electricity, steam, heat, cooling) from a utility provider.

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## Scope 3 GHG emissions

All other indirect emissions not included in scope 1 and 2 that occur in the value chain, both upstream and downstream. According to the GHG protocol, scope 3 emissions are separated into 15 categories and include, for example, purchased goods and services, business travel and commuting, and use of sold products.

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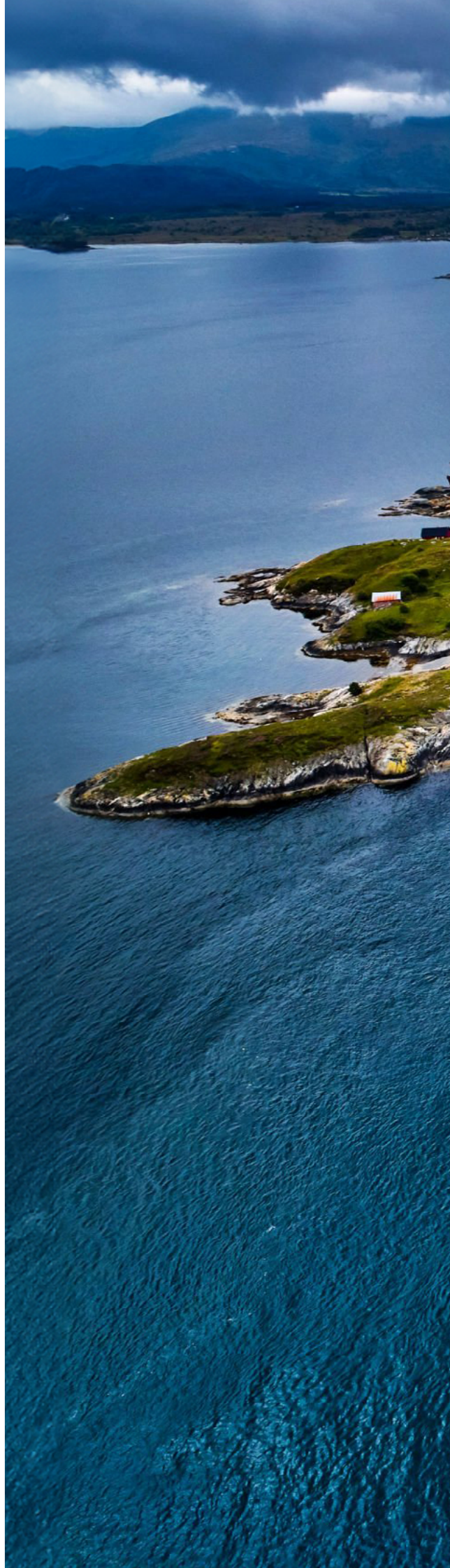
## Science Based Targets initiative (SBTi)

The SBTi is a global collaboration that enables businesses to set ambitious emissions reduction targets in line with the latest climate science. It independently assesses and approves companies' targets based on strict criteria.

**Caution concerning forward-looking statements**

The ABB Sustainability Report 2023 includes “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. We have based these forward-looking statements largely on current expectations, estimates and projections about the factors that may affect our future performance, including global economic conditions as well as the economic conditions of the regions and the industries that are major markets for ABB. The words “believe,” “may,” “will,” “estimate,” “continue,” “target,” “anticipate,” “intend,” “expect,” “plan” and similar words and the express or implied discussion of strategy, plans or intentions are intended to identify forward-looking statements. These forward-looking statements are subject to risks, uncertainties and assumptions, including among other things, the following: (i) business risks related to the global volatile economic environment; (ii) costs associated with compliance activities; (iii) difficulties encountered in operating in emerging markets; (iv) risks inherent in large, long term projects served by parts of our business; (v) the timely development of new products, technologies and services that are useful for our customers; (vi) our ability to anticipate and react to technological change and evolving industry standards in the markets in which we operate; (vii) changes in interest rates and fluctuations in currency exchange rates; (viii) changes in raw materials prices or limitations of supplies of raw materials; (ix) the weakening or unavailability of our intellectual property rights; (x) industry consolidation resulting in more powerful competitors and fewer customers; (xi) effects of competition and changes in economic and market conditions in the product markets and geographic areas in which we operate; (xii) effects of, and changes in, laws, regulations, governmental policies, taxation or accounting standards and practices, and (xiii) other factors described in documents that we may furnish from time to time with the US Securities and Exchange Commission, including our Annual Reports on Form 20-F. Although we believe that the expectations reflected in any such forward-looking statements are based on reasonable assumptions, we can give no assurance that they will be achieved. We undertake no obligation to update publicly or revise any forward-looking statements because of new information, future events or otherwise. In light of these risks and uncertainties, the forward-looking information, events and circumstances might not occur. Our actual results and performance could differ substantially from those anticipated in our forward-looking statements.





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