

# **ESG Report** 2024

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# Letter from Our CEO Russell J. Low, PhD



The global semiconductor industry is at the forefront of industrial innovation, sustainability and the clean energy revolution. As a leading supplier of ion implantation equipment, which is one of the most critical and enabling steps in the semiconductor manufacturing process, Axcelis is uniquely positioned to continue our pivotal role as a technology leader in accelerating semiconductor innovation.

We embrace our corporate citizenship role and sustainability-focused responsibilities, and we are dedicated to pursuing and achieving our Environmental, Social & Governance (ESG) goals and net zero commitments. In June 2023 we successfully completed our inaugural Carbon Disclosure Project (CDP) reporting. In December, 2023, we committed to the Science Based Targets initiative (SBTi), the leading global standard, which provides a clearly defined pathway for companies to reduce greenhouse gas (GHG) emissions, helping to prevent the worst impacts of climate change. Furthermore, we undertook our first scope 3 inventory.

As a further demonstration of our commitment to continually improving and enhancing our corporate sustainability program, this 2024 ESG report builds on our inaugural ESG report and integrates the Task Force on Climate-Related Financial Disclosures (TCFD) framework. We recognize the impact of climate change on our planet and business operations and the TCFD framework enables us to systematically analyze climate risks and opportunities for our business. As such, this report includes a preliminary discussion about climate-related governance, strategy, risk management, key performance indicators, and targets.

We are proud of our progress in reducing GHG emissions while delivering on efficient energy, water, and waste management, and we are equally proud of our workforce programs (professional development, diversity, recruitment), and community and charitable activities.

As always, Axcelis remains committed to cutting-edge innovation, a growing suite of high-performance products, and exceptional customer service. We draw strength from our culture, people, and track record and we are well positioned for continued success.

**Russell J. Low, Ph.D.** President and Chief Executive Officer

# Introduction

Axcelis' corporate sustainability agenda is founded upon good corporate citizenship, effectively addressing climate change, compliance with existing and new regulations, alignment with the highest global standards and continual improvement.

We are committed to pursuing our ESG goals and net zero commitments as part of an ongoing sustainability journey. In 2023, we published our first fully integrated ESG report, in which we successfully completed our inaugural Carbon Disclosure Project (CDP) reporting; undertook our first scope 3 inventory; and committed to SBTi as part of our net zero strategy.

This ESG report marks another important step forward in our reporting and disclosure practices. By aligning with the TCFD framework, we can better analyze the climate risks and opportunities over the short, medium and long-term. As such, this report includes a preliminary analysis of climate-related governance, strategy, risk management, key performance indicators and targets.

At the same time, this new approach enables Axcelis to effectively prepare for and respond to the new corporate sustainability and ESG regulations taking shape in the United States and across the European Union.



# **Climate and Environment**

# Path to Net Zero

As a founding member of the Semiconductor Climate Consortium, Axcelis Technologies, Inc. has committed to the Science-Based Targets initiative (SBTi) and the industry path to Net Zero by 2050. SBTi is a recognized leader in the global effort to mitigate the climate crisis, and it mobilizes the private sector to take the lead on urgent climate action.

# Environmental and Occupational Health and Safety Goals and Management Systems

The Axcelis executive officers and the VP of Environmental, Health and Safety (EHS) and Facilities (the Leadership Team) are responsible for setting and reviewing annual occupational health and safety and environmental objectives, targets and goals. These objectives, targets and goals are designed to appropriately control the occupational health and safety risks and minimize the environmental impacts of Axcelis' activities, products and services, including Axcelis' contribution to climate change. Our annual objectives, targets and goals are incorporated into our EHS management systems each year, and progress against these goals, as well as review of the effectiveness of the EHS management systems, is conducted on a quarterly basis as part of Axcelis' business-wide management review process.

# Axcelis Environmental and Health and Safety Policies

Axcelis understands that sustained high performance is dependent, among other factors, on the maintenance

of a high level of environmental performance and employee health and safety. Axcelis also understands that climate change is a relevant issue for our business and the global community in which we operate. In support of this principle, Axcelis Technologies has adopted an EHS Policy in which we commit to the following:

- Eliminating hazards and reducing health and safety risks to prevent occupational injuries and illnesses that may affect our employees, visitors and contractors.
- Establishing medium- and long-term goals and objectives in accordance with SBTi and in helping the semiconductor industry achieve net zero emissions by 2050.
- Compliance with all EHS regulations, legislation and other requirements applicable to our business and its environmental aspects or health and safety hazards.
- Conserving natural resources.
- Continual improvement of our EHS management and performance.
- Ensuring workers are provided the opportunity to consult on and participate in the Environmental Health and Safety Management System (EHSMS).
- Setting appropriate, achievable objectives and targets for the prevention of occupational injuries, illnesses and pollution.



- Periodically reviewing our EHS objectives and targets.
- Maintaining records regarding EHS policies, procedures and performance.

The Axcelis Environmental Health and Safety Leadership Team (AELT) is responsible for the overall performance of the EHSMS and for setting and reviewing EHS objectives, targets and goals. EHS staff will assist the AELT in ensuring that Axcelis' EHS objectives, targets and goals, and Axcelis' EHSMS appropriately achieve environmental performance and control the health and safety risks associated with our activities.

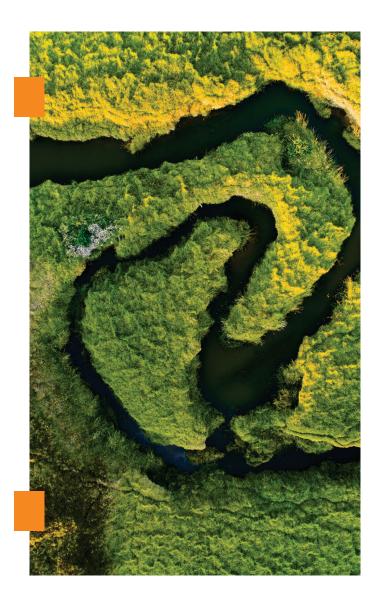
The Axcelis EHS Policy is communicated to all personnel working at Axcelis facilities and is available to visitors and the public. The Axcelis EHS Policy is included in the Axcelis Technologies, Inc. Supplier Code of Conduct, and all direct suppliers as well as our full supply chain are expected to comply with the Axcelis EHS Policy as if they had adopted the policy directly.

## **Controlling Axcelis' Impact on the Environment**

Each year, Axcelis identifies and evaluates the environmental aspects of our activities, as well as planned, new, or modified projects, products and services that we can control and influence in order to determine those that may have a significant impact on the environment. These are referred to as "environmental aspects." When determining environmental aspects, Axcelis considers all potential conditions, including abnormal conditions and reasonably foreseeable emergency conditions. The following environmental aspects are identified as "Significant Environmental Impacts":

- S Electricity consumption
- > Natural gas and other fuel consumption
- Fossil fuel consumption from employee commuting
- Contribution to global climate change

Axcelis conducts quarterly evaluations to ensure that the identification and current performance of Significant Environmental Impacts are understood. We set goals and track performance for our Significant Environmental Impacts and other environmental factors, including water, waste, and air emissions. Our 2023 goals and results are set forth below.





2023 TARGETS	CATEGORY	2023 RESULTS	STATUS
Reduce direct GHG emissions (Scope 1) from Beverly HQ to < 3.7 metric tonnes CO2e / \$1M revenue	GHG Emissions	Reduce direct GHG emissions (Scope 1) from Beverly HQ to < 3.7 metric tonnes CO2e / \$1M revenue	Achieved
Reduce indirect GHG emissions (Scope 2) through the purchase of Renewable Energy Credits.	GHG Emissions	Reduced market-based Scope 2 emissions by 2197 Tonnes CO2e.	Achieved
Reduce SF6 manufacturing emissions to ≤ 266 metric tonnes CO2e from Beverly HQ	GHG Emissions	SF6 emissions increased to 326 metric tonnes CO2e, up 10.1% from 2022	Did Not Achieve
Reduce solid waste disposal from Beverly HQ to ≤ 0.45 metric tonnes / \$1M revenue	Waste	Solid waste disposal decreased to 456.8 metric tonnes in 2023, or 0.40 Tonnes / \$1M revenue	Achieved
Reduce hazardous waste disposal from Beverly HQ to ≤ 6.62 metric tonnes / \$1M revenue	Waste	4.55 metric tonnes of federally regulated and MA regulated hazardous waste, combined - a decrease of 31%	Achieved
Reduce water consumption from Beverly HQ to < 15.0 million gallons consumed	Water	Water consumption decreased to 13.44 million gallons	Achieved
Collect 2023 emissions data from Korea AAOC facility and offsite warehouses	GHG Emissions	Collected Scope 1 and 2 data from Korea AAOC and office/warehouse locations in Pyeongtaek	Achieved
Achieve a near miss-to-injury ratio of >1.25:1	Health & Safety	Increased near misses to accident ratio to 1.31 : 1	Achieved
Recognize 44 employees for worker safety	Health & Safety	68 employees were recognized in 2023	Achieved
Achieve OSHA recordable equivalent rate of ≤ 0.75 per 100 employees	Health & Safety	Safety performance improved to ≤ 0.73 per 100 employees in 2023	Achieved

# **Greenhouse Gas Emissions**

Axcelis recognizes that emissions from our operations contribute to climate change. We support the goals of the Paris Agreement, made under the United Nations Framework Convention on Climate Change, as well as the Sustainable Development Goals (SDGs).

We are committed to measuring and minimizing the impact our operations have in this area, where feasible. To do this, we use the Greenhouse Gas (GHG) Protocol Corporate Standards, which is the international standard for corporate GHG accounting and reporting. The GHG Protocol classifies a company's GHG emissions into three "Scopes." Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 emissions are indirect emissions from the generation of purchased energy. Scope 3 emissions are all indirect emissions (not included in Scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.

Axcelis tracks 100% of Scope 1 and 2 emissions for our Beverly, MA, headquarters, the newly built Axcelis Logistics Center (ALC) in Beverly, MA; the Axcelis Asia Operations Center (AAOC) in Pyeongtaek, South Korea; and all warehouse and office locations in each country where we operate. We strive to ensure our Scope 1 emissions are minimized to the greatest extent practical. In addition to direct fuel burning, Axcelis' Scope 1 emissions include fugitive emissions of perfluorinated process chemicals (PFCs) used in product manufacturing. Axcelis has greatly reduced the use of these materials and has instituted a means of recycling sulfur hexafluoride (SF6) gas used in the final test process of high-energy implanters. Additionally, Axcelis' "ship from cell" manufacturing process eliminates the final test process in the factory, which reduces our use of SF6 gas and overall emissions. In the ship from cell process, individual ion implanter modules are built and tested at the cell build level

prior to shipping directly to the customer for first integration at the customer site.

# **Scope 1 Emissions**

As a result of our initiatives, Axcelis has reduced company-wide Scope 1 emissions from 5,572 metric tonnes of carbon dioxide equivalent (CO2e) in 2022 to 3,411 metric tonnes of CO2e in 2023. This constitutes a 38.8% decline from 2022 to 2023. The year-over-year company-wide reduction includes a 15.5% decrease in Scope 1 emissions at our Beverly, MA, headquarters.

In 2023, Axcelis' company-wide Scope 1 GHG emissions from fuel burning, including CO2, N2O and CH4, comprised 2,701 metric tonnes of CO2e. In tackling SF6 emissions, Axcelis achieved the target, set in 2022, of emitting less than 341 metric tonnes CO2e at the Beverly facility in 2023. However, we failed to achieve our aggressive 2023 target of  $\leq$  266 metric tonnes CO2e in SF6 emissions, which increased slightly from 2022 at the Beverly headquarters from 296 to 326 metric tonnes of CO2e – a 10.1% increase. At the Korea AAOC, SF6 emissions decreased substantially from 1,707 to 53 metric tonnes of CO2e in 2023, representing a 96.9% reduction, and contributing to the overall decrease in company-wide global Scope 1 emissions.

When normalized using our 2023 revenue of \$1.13 billion, company-wide Scope 1 emissions were 3.02 metric tonnes per \$1M in revenue, and Axcelis' Beverly headquarters were 2.24 metric tonnes per \$1M in revenue. This is compared against the 2022 figures of 6.06 and 3.26 metric tonnes per \$1M in revenue, respectively.



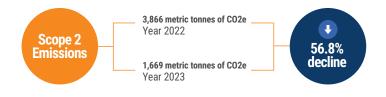
# **Scope 2 Emissions**

In 2023, Axcelis adopted a revised methodology for calculating Scope 2 emissions (the indirect emissions generated from the purchase of energy). Axcelis uses conversion factors from the U.S. EPA's eGrid Power Profiler system to determine location-based emissions for its U.S. locations, and Carbon Footprint Ltd. conversion factors for other global locations. Market-based Scope 2 emissions have been calculated separately, reflecting renewable energy purchase agreements. Axcelis' company-wide Scope 2 locationbased emissions were 5,812 metric tonnes of CO2e in 2023, an increase of 11.3% from the year prior. When normalized using total revenue of \$1.13B in 2023, location-based emissions were 5.14 metric tonnes per \$1M in revenue, a decrease of 9.3% from the previous year.

Scope 2 company-wide, market-based emissions were 1,669 metric tonnes of CO2e in 2023. This is a 56.8% reduction from 3,866 metric tonnes of CO2e in 2022. At the Beverly headquarters, Axcelis achieved a 88.5% reduction in market-based Scope 2 emissions, from 2,600 to 300 metric tonnes of CO2e between 2022-2023, by purchasing renewable energy certificates (RECs) to procure energy from zero-emission sources.

The AAOC manufacturing facility consumed a total of 2,379,257 kWh of electricity in 2023 with a CO2e of 882 metric tonnes. Despite an increasing share of renewables in the energy mix, CO2e emissions increased by 7.5% from 2022 (location and market-based factors are the same).

All other Axcelis global facilities consumed 737,752 kWh of electricity in 2023, an increase of 38.9% from 2022. Location-based CO2 equivalent Scope 2 emissions increased by 33.3% across all other global facilities, from 238 to 317 metric tonnes, from 2022-2023. Similarly, market-based emissions increased by 32.1%.



# Scope 3

Axcelis understands the importance of tracking emissions throughout the value chain and beyond our boundaries. The GHG Protocol defines Scope 3 emissions as "all indirect emissions (not included in Scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions."

In 2023, we undertook our first detailed and comprehensive inventory of 2022 Scope 3 emissions (covering all applicable categories). This effort is an integral part of our SBTi commitment and we set our Scope 3 baseline as 1,640,060 tons of CO2e using our 2022 estimated results.

Given that Scope 3 emissions are neither directly made by the company nor the outcome energy purchased by the company, we can only estimate these amounts. All estimates involve assumptions and are subject to risks and uncertainties. Actual Scope 3 emissions may differ materially from those expressed in this report.

Readers are cautioned not to place undue reliance on these estimates, which reflect management's analysis using assumptions that we currently believe are reasonable. We assume no obligation to update these estimates to reflect changes in factors or assumptions, except as may be required by law.

<sup>1</sup> The most recent conversion factor for The Energy Administration of the Ministry of Economic Affairs was used for Taiwan locations.

We have estimated that our total 2023 Scope 3 emissions were 2,015,713 tons of CO2e, accounting for 99.8% of our total carbon footprint. Within the ten applicable categories, we identified three that are responsible for approximately 98% of Axcelis' total scope 3 emissions. These include, in descending order of contribution:

- i. Category 11 Use of Sold Products;
- ii. Category 1 Purchased Goods and Services; and
- iii. Category 9 Downstream Transportation and Distribution, as shown in the chart below.



#### CATEGORY tCO2eq % OF S3 113,162 5.6% 1. Purchased goods and services 0.2% 4,146 2. Capital goods 2,434 0.1% 3. Fuel- and energy-related activities (FERA) 20.239 1.0% 4. Upstream transportation in operations 0.0% 5. 322 Waste generated in operations 6,004 0.2% Business travel 6. 3,180 0.2% 7. Employee commuting 1.6% 31,538 8. Downstream transportation and distribution 1,833,412 91.0% 9. Use of sold products (including indirect use) 0.1% 1,275 10. End-of-life treatment of sold products 2,015,713 100% **TOTAL SCOPE 3**

# **Scope 2 Emissions**

For Scope 3, Category 11, which comprises 91.0% of all Scope 3 emissions, the average annual energy consumption per machine sold during the year was reported by Axcelis and multiplied by the emission factor for the energy mix of the country where the machines were sold. The average energy consumption is determined by measuring the electrical energy consumed during baseline processes along with utilities including exhaust, compressed dry air, nitrogen, process cooling water, and heat loss. Total electrical consumption is calculated using the SEMI S23 Guide for Conservation of Energy, Utilities and Materials Used by Semiconductor Manufacturing Equipment. SEMI S23 provides factors to convert utilities to kilowatt hours, and also provides utilization assumptions for calculating annual total electrical consumption. Axcelis has estimated its product lifespan is 25 years.

Following this analysis, we are now working on defining key actions to reduce the power consumption of our implanters while also monitoring and expanding the use of renewable energy in our customer base. Additional steps will be taken to refine the data on our purchased goods and services by involving our supply chain, and to reduce the amount of air-freighted products.

## Water Management

Axcelis recognizes that water is a vital natural resource and makes efforts to minimize water use whenever possible. Axcelis headquarters uses water for evaporative cooling, laboratory processing, aqueous cleaning, cafeteria operations and other domestic uses. Occasionally, water is added to our closed-loop chilled water and process cooling systems. In 2023, Axcelis set a goal to use less than 56.78 thousand cubic meters (15 million gallons) of water. Actual water consumption in 2023 was 50.88 thousand cubic meters (13.44 million gallons).

Of the total water usage at Axcelis headquarters in 2023, 47% was lost to evaporation from our evaporative cooling towers that serve the chilled water plant. The weather was a major contributing factor, with the northern hemisphere experiencing the hottest meteorological summer on record at 2.59 degrees F (1.44 degrees C) above average.

Axcelis operates a small, industrial wastewater pretreatment plant at our Beverly headquarters. The effluent (52,835 gallons, or 0.4% of all water used in 2023) from this plant is discharged to the South Essex Sewerage District, a publicly owned treatment works, under an industrial discharge permit. Axcelis has consistently complied with all aspects of its permit for at least the last six years.

# **Waste Management**

Axcelis headquarters is a Small Quantity Generator of Hazardous Waste according to the regulations of the Massachusetts Department of Environmental Protection, found in 310 CMR, Part 30. In 2023, Axcelis headquarters generated 4.55 metric tonnes of federally regulated and MA regulated hazardous waste, combined – a decrease of 31% from 6.62 metric tonnes in 2022. In addition, 0.39 metric tonnes of universal waste were diverted from hazardous waste streams for recycling. Including universal waste, 7.9% of all hazardous waste was diverted to recycling.



<sup>2</sup> \*Based on information obtained from the Aqueduct Water Risk Atlas (<u>https://wri.org/applications/aqueduct/country-rankings/?country=USA&indicator=bws</u>). None of this water was withdrawn from a region with high or extremely high baseline water stress. In 2023, Axcelis' Beverly headquarters generated 1,128.6 metric tonnes of solid waste, with 671.8 metric tonnes diverted to recycling, for a recycling percentage of 59.5% – a 9.78% increase in the recycling rate from the previous year. Solid waste disposal from our headquarters decreased by 48.7%, from 889.6 in 2022 to 456.8 metric tonnes in 2023.

# **Energy Management in Manufacturing**

In 2023, Axcelis worldwide consumed 54,110 gigajoules of energy, which includes 50,794 gigajoules of purchased energy at our Beverly, MA headquarters. This compares to 57,902 gigajoules of energy consumed at the Beverly, MA headquarters in 2022 – a 12.4% reduction. One hundred percent of our 2023 energy purchase for our headquarters came from BP p.l.c., an integrated oil and gas company. Axcelis has retired renewable energy credits from the generation of hydroelectric power in Maine equivalent to 94% of the headquarters' electricity consumption. Regarding the remaining 6% of headquarters' electricity use not covered by the retired RECs, approximately 17% is carbon-free renewable energy (hydro, solar, wind). However, BP purchases and retires compliancerenewable energy credits to meet the Massachusetts requirement of 32% renewable energy. A total of 842,332 kWH (3,032.4 gigajoules) was generated onsite at Axcelis headquarters in a 250 kW capacity CHP.



## **TCFD Response: Climate-Related Risks, Opportunities, and Time Horizons**

Our inaugural Climate Risk Assessment (CRA) – conducted by an independent consulting firm – sought to identify the major risks and opportunities as well as key transition factors at a high level, factoring in short, medium, and long-term horizons. The CRA focused on Axcelis' core operations. The next phase will include more in-depth assessments of the (operational and value chain) risks and opportunities within the context of Axcelis' strategic planning, our Enterprise Risk Management system (ERM) and the next phase of our corporate sustainability and decarbonization roadmap.

# **Risks**

## **Physical Risks**

As a global company with a geographic footprint covering the United States, Europe, and Asia-Pacific, Axcelis' scope of exposure to physical risks is projected to vary geographically and temporally across value-chain and scenarios. The severity of potential impact varies by geographic location.

Axcelis' headquarters, warehouse, and operational facilities in the U.S. and the Republic of Korea (South Korea) face limited-to-moderate exposure to key hazards such as increased precipitation, storms, flooding, and extreme heat, based on shortto-long-term scenarios. The historic and forecast regional climate information in this section are derived from publicly available sources, and the company has not engaged in any independent research on these topics.

- Storms and Precipitation Extreme storms and increased precipitation represent the single greatest threat to the Beverly-Salem community. The average annual precipitation in the Northeast increased by 10% from 1895 to 2011, with precipitation from extreme heavy storms increasing by 70% since 1958. Forecasters expect to see continuing rainfall increases in the Beverly-Salem region, reaching 5.4" more rainfall per year by 2050. In South Korea, which faces increased precipitation due to climate change and the monsoon season, 6" more rainfall is projected by 2050. In general, precipitation trends are higher on Korea's southern coast as compared to the northernmost inland regions.
- Extreme Heat While the Northeastern U.S. is not generally susceptible to extreme heat waves, the region has experienced record highs in recent summers and will face increased temperatures over the coming decades. The Beverly-Salem Climate Action Plan notes an increase in overall temperatures, including having 7 days annually over 90 degrees from 1971 to 2000, and the 2050 projection of having 31 days over 90 degrees. In South Korea, temperatures could increase by as much as 2.5°C by 2050 on a high carbon pathway.
- Sea-Level Rise Massachusetts has experienced a faster rate of sea level rise than the global average, with Boston rising 8 inches since 1950 and the Northeast region rising 12 inches since 1900. Coastal flooding risk is a concern as the area has

already experienced 1ft of sea-level rise over the last century, and current projections estimate a 3ft sea-level rise by 2050. Massachusetts' coastline is over 1.519 miles, and the state has developed the "ResilientCoasts" Initiative to build resilience in its 78 coastal communities, including Essex County. Meanwhile, South Korea faces sea level and coastal erosion risk due to its extensive shoreline (1,499 miles). Relative sea level rise has been observed over the past century with an annual average increase of approximately 2.4 millimeters per year since the 1990s. Based on the latest IPCC projections, global sea levels may rise between 0.18 meters (0.59") under a low emissions scenario, and 0.23 meters (0.75") under a high emissions scenario.



#### axcelis

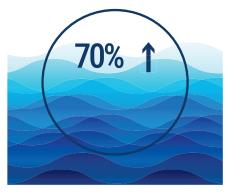
It is worth noting that the Commonwealth of Massachusetts, the Beverly-Salem community and the Government of South Korea have all embarked on ambitious climate action/mitigation plans – the Clean Energy and Climate Plan (Massachusetts), the "Resilient Together" Climate Action Plan (Beverly-Salem), the "ResilientCoasts" Initiative (Massachusetts) and the National Climate Change Adaptation Plan (South Korea) – that are focused on resilience over the medium and long-term.

#### Secondary Locations -

Axcelis' core operational facilities face less exposure to extreme climate scenarios when compared to secondary office locations, which face greater shortand long-term risks. For example, the office locations in Arizona, California, Texas, and Oregon are situated in "very high" and "relatively high" risk zones, which average 98.99 in the FEMA Risk Index, based on key hazards (such as wildfire, earthquake and riverine flooding in California locations).

Mid-term and long-term scenarios anticipate further climate stressors such as extreme heat (Chandler, AZ, will average a high of 89.6 by 2040 and 90.7 by 2050). However, given that these are secondary locations – not primary manufacturing/operational locations – the overall material impact on Axcelis' business will be limited.







#### **Transitional Risks**

- a. Regulatory There are a number of new reporting requirements and wide-ranging regulatory initiatives taking shape across the sustainability/ESG landscape in the U.S. and the EU.
- Short-Term (0-5 years) Axcelis must respond to new reporting requirements and relevant regulatory requirements in the U.S. (SEC Climate Rule, California climate laws – CCDA & CFRA, EPA PFAS rule), and in Europe, such as the Carbon Border Adjustment Mechanism (CBAM).
- Mid-Term (5-10 years) As regulations in the U.S. and EU are enforced, Axcelis must ensure that its reporting and disclosure practices are fully aligned, and that it remains fully compliant.
- Long-Term (10-30 years) The sustainability/ESG regulatory landscape continues to change. Therefore, Axcelis may face new requirements as the company heads towards the 2040 and 2050 milestones.
- b. Manufacturing Processes Axcelis' manufacturing process involves emissionintensive process chemicals, and we must address new regulatory requirements focused around phenol, isopropylated phosphate (3:1) or "PIP (3:1)" and per- and polyfluoroalkyl substances, or "PFAS." Similarly, Axcelis' manufacturing process consumes significant amounts of water, and we may be required to

adopt new, less water-intensive technologies. While Axcelis' Beverly headquarters is not situated in a water-stressed state (such as California, New Mexico, Colorado or Nebraska), it is worth noting that Massachusetts experienced significant drought conditions as recently as 2022, ranking it as one of the driest periods on record over the past 139 years.

- c. Climate Technology As Axcelis shifts to low-carbon technologies and expands its suite of renewable energy solutions, we may face challenges related to overall integration, interoperability, and ROI timeframes. A steady pace of transition may offset these potential challenges.
- d. Carbon Pricing Carbon pricing has emerged as a key factor in the climate mitigation debate, and there are currently over 60 carbon tax and emissions trading programs at the regional, national, and sub-national levels. Axcelis must continue monitoring these developments in key jurisdictions (such as the EU) to determine the potential impact of a carbon tax on its operations.
- e. Transportation and Shipping Like all global corporations, Axcelis relies on maritime and air freight for shipment of goods. Axcelis' upstream and downstream transportation emissions account for 2.6% of its Scope 3 emissions. Low-carbon shipping options are in development in parts of the global shipping industry, but they are not yet readily available. Additionally, severe weather events may pose a risk to air and maritime transportation, resulting in potential shipping delays in short, medium, and long-term scenarios.

- f. Facilities Due to its current facility and manufacturing infrastructure, Axcelis may face energy efficiency constraints in the short- and medium-term timeframes. Capacity challenges may also limit the company's ability to fully deploy renewable energy solutions and reduce carbon footprint while maximizing ROI. LEEDcertified real estate options may be factored into medium- and long-term planning.
- g. Market An increasing number of Axcelis' leading customers are implementing aggressive climate-related policies, decarbonization, and energy efficiency plans, and this shift may impact the scope and nature of our corporate sustainability plans as well as our market share.
- h. Reputation Axcelis' reputation among peers, the investor community, current and potential customers, staff and recruits – may be negatively impacted if we do not fully address climate change and sustainability overall.



# **Opportunities**

- a. Emissions Reduction/Decarbonization Having committed to SBTi, Axcelis is well positioned to benefit from a long-term decarbonization and net zero strategy while continually reducing GHG emissions.
- b. Scope 3 Emissions Axcelis' Scope 3 emissions primarily comprise sold products, purchased goods and services, upstream and downstream transportation and distribution. We have an opportunity to reduce upstream and downstream emissions through ongoing, internal efforts that are focused on our supply chain. At the same time, we may benefit from supplier and customerbased decarbonization activities.
- C. Climate Technology/Energy Efficiency As Axcelis implements its decarbonization plan, we will have an opportunity to integrate new energyefficient technologies and renewable energy solutions into our global facilities while also securing RECs and pursuing joint Power Purchase Agreements (PPAs).
- d. Products and Services Axcelis will benefit from emerging technologies and improved manufacturing processes (through internal and external efforts), and this could enable us to effectively address various energy, water, and

chemical impacts. In addition, Axcelis' marketleading ion implanters, which are optimized for silicon carbide (SiC) power management chip fabrication, are enabling technologies for the transition to electrical energy in transportation, heating and other energy-consuming applications.

- e. Facilities As part of our potential expansion beyond the existing facility infrastructure, Axcelis has an opportunity to identify LEEDcertified options, which could further reduce the company's carbon footprint and improve energy efficiency.
- f. Collaboration Axcelis may benefit from the progress made by key customers and suppliers on overall corporate sustainability initiatives, climate mitigation efforts, net zero plans, and renewable energy utilization. Strategic collaboration may enable the company to further enhance its overall response to climate change and sustainability.
- 9. Reputation By fully addressing climate change and climate-related issues through a comprehensive sustainability program, including a decarbonization plan, Axcelis could enhance its reputation amongst peers, the investor community, current and potential customers, and staff and recruits.



# **Axcelis and Biodiversity**

Axcelis understands the importance of assessing its overall impact on local biodiversity and takes measures to minimize any potential impact while supporting conservation efforts (protected species and land) in its locations in the U.S., Asia-Pacific, and Europe. The company's commitment is founded upon knowledge and awareness.

Axcelis recognizes that there are 180 species of animals and 273 species of plants that are protected under the Massachusetts Endangered Species Act (M.G.L. c. 131A). A total of nine endangered species are listed in Essex County. The company also understands that the 435 native species are listed as endangered (E), threatened (T), or of special concern (SC) and are tracked in the Massachusetts Department of Fish and Game/Division of Fisheries & Wildlife (MassWildLife) database.

In South Korea, Axcelis recognizes that that there are a total of 1,742 nationally protected species designated by the Ministry of Environment (267 species), the Ministry of Oceans and Fisheries (83 species), the Cultural Heritage Administration (461 species), and the Korea Forest Service (931 species/ rare and special plants). Based on Axcelis' operational activities and geographical footprint within the Commonwealth of Massachusetts and South Korea, Axcelis complies with relevant local and federal regulations related to natural resource conservation and wildlife preservation.

## **SECTION 2**

# **Health & Safety**



# **Employee Health and Safety**

The Axcelis Health and Safety Management System is based on the principles outlined in the ISO 45001 Occupational Health and Safety Management Systems standard. As such, our system is intended to result in continual improvement of employee health and safety performance, fulfillment of legal and other requirements, and achievement of employee health and safety objectives.

Major components of our system include top management leadership and commitment, consultation and participation of workers, identification of hazards and controls, risk assessment, evaluation of opportunities for improvement, establishing plans/ objectives/targets for continuous improvement, documentation of policies and procedures, communication, training and awareness on health and safety matters, performance evaluation, periodic compliance audits, and management review.

In 2023, Axcelis' worldwide OSHA recordable incident rate equivalent (applying U.S. OSHA recordable criteria to all employees, regardless of country) was 0.73 recordable incidents per 100 full-time employee equivalents, which enabled us to reach our target of less than 0.75 incidents per 100 employees.

Axcelis invests heavily in EHS training for our global workforce. In 2023, Axcelis successfully delivered 20,557 individual EHS, HR, and Legal and Ethics training courses through our online Learning Management System. Monthly reports regarding the training performance of all employees are sent to the Leadership Team. In order to drive timely completion, our CEO directly contacts employees with low training completion rates in order to reinforce the importance of completing their assigned training on time. Training completion is also included in our annual employee performance review process. In 2023, on average, employees completed 99.5% of all training assignments that were due on or before year-end.

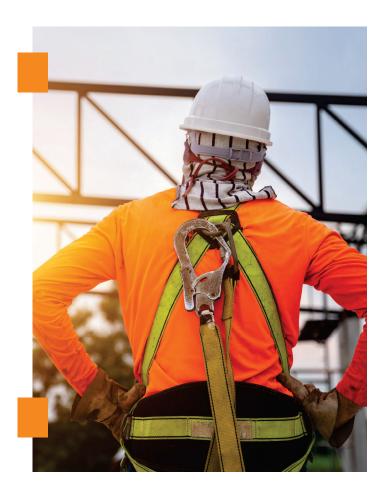
Other health and safety metrics are tracked and reviewed with the Leadership Team on a quarterly basis. These metrics include the ratio of near-miss reports (which are strongly encouraged), as well as accidents that result in first aid or greater; the number of days a corrective action, related to an accident or other incident, is open before it is resolved; and the number and content of health and safety communications that are delivered to employees. Axcelis has experienced no legal proceedings associated with employee health and safety violations in more than six years, and thus has incurred no monetary losses as a result.

# **Customer Safety**

Axcelis is equally committed to the safety of our customers. The product material provided to customers includes an "Essential Health and Safety Manual" that outlines the key safety considerations for our equipment. Customers also receive detailed Operations and Preventive Maintenance manuals that provide safe operating and maintenance information for our equipment, recommended operator experience, personal protective equipment, and hazardous energy control procedures for each task, among other safetyrelated information.

Our system sales terms include credits that customers can use to receive product training from Axcelis. This training covers the use and maintenance of each ion implanter model, including safety training in an overview of the equipment and task-specific safety training.

Safety Data Sheets (SDS) that conform to the Globally Harmonized Standard are provided to all customers for all substances, mixtures included within our products (such as lubricants or cooling fluids), and for substances and mixtures that are sold to support continued use and servicing of the equipment. SDS are provided to customers in their local language, upon request.



# **Product Lifecycle Management**

#### **Substances of Concern**

All of Axcelis' products include at least some IEC 62474- declarable substances. Chemicals on the list of IEC 62474 declarable substances that are applicable to Axcelis' products are regulated by EU Registration, Evaluation, and Authorization of Chemicals (REACH) Regulation (EC/1907/2006), EU Regulation No. 517/2014 on fluorinated greenhouse gasses (EU F-Gas), EU Restriction of Hazardous Substances Directive 2011/65/EU (EU RoHS) and its amendments, or China's Administrative Measures for Restriction of the Use of Hazardous Substances in Electrical Appliances and Electronic Products (China RoHS). Axcelis maintains compliance programs for all of the regulations listed above and takes steps to proactively monitor and address all emerging regulations.

As a component of our EU REACH compliance program, Axcelis provides web-based reporting to our customers on Substances of Very High Concern (SVHC) or Candidate List Substances, which are known to be included in our products. We monitor the inclusion of SVHC in our products from purchased parts and components. We also require our suppliers to notify us if SVHC, regardless of the amount or concentration, are included in parts and components they sell to Axcelis.

Axcelis incorporates OEM chillers into our products that contain limited amounts of refrigerants that are regulated by the EU F-Gas regulation. Axcelis has made efforts to minimize the quantities of F-Gas refrigerants in the chillers we select to be incorporated into our products. For chillers that are shipped to the EU, Axcelis or its customers utilize the 100 tonnes per year of CO2e exemption for the F-Gases included in the chillers. The EU has issued a revised F-Gas regulation. Beginning in March 2024, the CO2e exemption for imported F-Gas within Chillers was lowered to 10 tonnes CO2e per year.

Because our products are considered Large Scale Stationary Industrial Tools under EU RoHS, Axcelis' products are exempt from EU RoHS requirements. Axcelis maintains a China RoHS compliance program that discloses reportable content and applies product labeling in conformance with the China RoHS regulation.

#### **Product Lifecycle Support**

As part of our commitment to our customers, Axcelis seeks to ensure that our products remain productive and cost efficient throughout their life cycle, which can exceed 25 years. During a product's lifecycle, we strive to recognize the "voice of the customer" and to provide continuous improvements through upgrades and service offerings. Axcelis has received several awards from customers who recognize the contributions we have made to their success through these aftermarket offerings.

#### **Product Safety and Sustainability**

Axcelis is committed to delivering safe and effective products to our customers. Many of our customers actively solicit continuous improvement in both the safety and environmental impact of our ion implantation systems. Each Axcelis product is evaluated against guidelines published by our trade organization, SEMI (formerly called Semiconductor Equipment and Materials International). SEMI's S2 Guideline, called Environmental Health and Safety Guideline for Semiconductor Manufacturing Equipment," requires a review of equipment by a third-party evaluator which, based on the results of the evaluation, certifies that the product conforms to the guidelines outlined in the SEMI document. Axcelis also ensures that our products comply with all environmental and safety laws and regulations that are applicable to our systems, in the countries in which our systems are located. Customers use our systems in the United States, Europe, and Asia. The European Union has taken a leadership role in safety regulation, and Axcelis ensures its systems comply with the European Union's Machinery Directive (2006/42/EC), the Directive's "Essential Health and Safety Requirements Relating to the Design and Construction of Machinery," and the European Union Electromagnetic Compatibility (EMC) Directive (2014/30/EU).

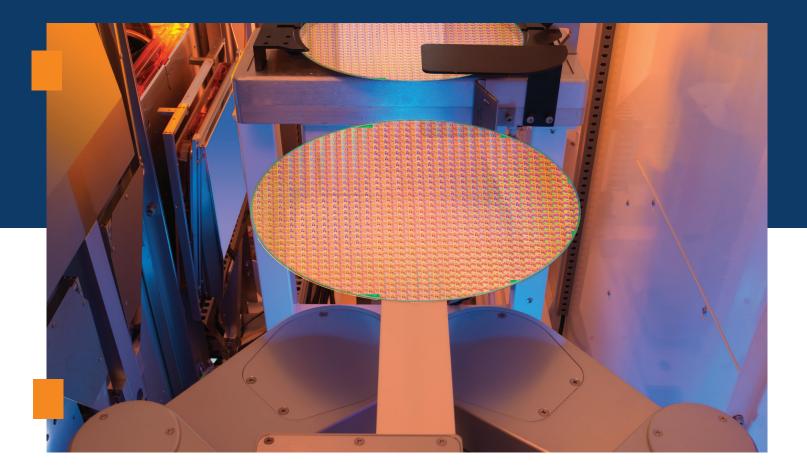
Axcelis evaluates the use of utilities by our ion implantation systems according to the SEMI S23 Guideline, "Guide for Energy, Utilities, and Materials Use Efficiency of Semiconductor Manufacturing Equipment," and continually looks for process improvements to reduce the consumption.

# **Materials Sourcing**

Axcelis relies on outside vendors to manufacture many of the components and subassemblies of our products. Some of these components and subassemblies contain critical materials as defined by the National Research Council. We obtain many of these components and subassemblies from a limited group of suppliers. Axcelis consistently manages its supply chain in order to ensure appropriate and timely access to the components and subassemblies necessary to manufacture our products. On an as-needed basis, in order to reduce or address a possible risk, we will either seek alternative sources for supplies or decide to manufacture the components or subassemblies internally.

## **Total Production**

While Axcelis does not publicly report the number of ion implanters shipped per year, revenue for 2023 was \$1.13 billion, of which systems revenue was \$883.6 million (78.2%). We use Axcelis' total annual revenue as a denominator for normalizing annual greenhouse gas Scope 1 and Scope 2 emissions for comparison against our own performance and the performance of peers.









# **Ethical Standards and Legal Compliance**

The Axcelis ethics policy applies to our directors, executive officers, and all other employees. This policy promotes ethical actions and legal compliance. We provide employee training on ethics and a variety of compliance topics, including the Foreign Corrupt Practices Act, export controls regulation, employment laws, and insider trading regulation.

In 2023, we received one report alleging ethical violations by an employee in Korea. We responded to the reporting employee and commenced an investigation, which confirmed the inappropriate use of company credit cards by a Korean employee. We determined that termination of employment was necessary.

No reports of legal compliance violations were received by the company in 2023, nor were any such incidents otherwise identified by the company in 2023.

# Independent Chairperson of the Board or Lead Director

The Governance Guidelines adopted by our Board of Directors require that either the Chairperson of the Board is an independent director, or if not, a Lead Director is appointed by the Board. The responsibilities of Chairpersons and Lead Directors are specified in our Governance Guidelines.

# Directors and Officers Stock Ownership Guidelines

Axcelis' Stock Ownership Guidelines require that our independent directors own shares having a value at least equal to three times the amount of the annual base Board retainer (which is currently \$65,000). Our Chief Executive Officer is required to own shares having a value equal to three times his or her base salary. The other Executive Officers are required to hold the lesser of 16,250 shares or shares having a



value equal to 150% of such officer's base salary. Executive Officers are encouraged to retain 50% of any shares received on exercise of options or vesting of RSU awards (after payment of the exercise price and tax withholding), until stock ownership guidelines are met. Directors and Executive Officers have five years to meet guideline ownership.

# **CEO Performance Review Process**

Our Governance Guidelines specify the process by which an annual Chief Executive Officer performance review is developed and submitted to the full Board for their consideration, with input from the Chief Executive Officer, the Chairperson or Lead Director, and all other Board members.

# Annual Board Assessment and Director Evaluation

Our Governance Guidelines and the charter of the Nominating and Governance Committee address the requirement for annual Board self-assessment processes, which cover meeting agendas, schedules, presentations, access to and communications with senior management, and the Board's contribution as a whole. The annual process also includes an assessment by each director of their own and each other director's individual performance, using specified criteria.

# **Refreshing our Board**

Our Governance Guidelines require annual Board self- and peer- evaluations prior to the re-election nomination process. These evaluations, along with other assessments, are considered in the annual Board nomination process. Our Governance Guidelines provide that Directors who have reached the age of 75 may not be nominated for election. This retirement policy has no exemptions or conditions. Since its adoption in 2015, seven incumbent directors have not been eligible for renomination as a result of the retirement policy. Our Governance Guidelines also require Board members to tender their resignation on a change in principal occupation, and if he or she receives a greater number of votes "withheld" in an uncontested election than votes "for" his or her election.



# Prohibition on Directors and Officers Hedging or Pledging Stock

Our policies prohibit directors and executive officers from pledging Axcelis stock in a margin account or otherwise entering into transactions designed to hedge or offset any decrease in the market value of Axcelis stock. The company's policies also prohibit the purchase of publicly traded options on Axcelis securities and place limitations on the use of standing or limit orders to purchase or sell Axcelis securities.

# **Protections for Minority Stockholders**

Our charter and bylaws protect all stockholders by requiring advance notice of stockholder proposals. They also prohibit stockholders from calling a special meeting, acting by written consent, or filing governance litigation outside of Delaware. These provisions ensure that minority stockholders have notice and an opportunity to vote on all matters properly brought before them, and that claims are heard by sophisticated Delaware courts.

# **Executive Compensation Governance**

As discussed in detail in our proxy statement, Axcelis adopts best practices with respect to executive compensation, including:

- i. the implementation of pay for performance in compensation structure and terms,
- ii. implementation of executive claw back rights,
- iii. requiring a termination of employment for any change of control benefit and eliminating excise tax indemnifications,
- iv. imposing multi-year equity award vesting,
- v. utilizing peer benchmarking
- vi. capping incentive payouts, and
- vii. eliminating any executive perquisites.







# **Diversity, Equity, Inclusion, and Belonging**

Axcelis is dedicated to building and maintaining a diverse workforce, fostering a culture built on the principles of inclusion and equity, and maintaining a workplace free from discrimination. We strongly believe that a diversity of experience, perspectives, and backgrounds will lead to a better environment for our employees, and better products and services for our customers. Axcelis' commitment to diversity extends to our Board of Directors, our leadership team, and all teams and functions across our global locations.

As a global company, an inherent diversity exists as we come together with backgrounds in different cultures and countries. Our ultimate goal is to ensure that Axcelis' workforce reflects the communities in which our work is done, in all of our locations around the world.

Axcelis is implementing various initiatives to increase the presence of underrepresented groups across our

business and industry, including establishing longterm goals that are tied to demographic realities and intrinsic fairness.

Note: This disclosure discusses the demographic makeup of our U.S. workforce and our goals to continue to increase diversity in our U.S. workforce. Demographic changes at Axcelis reflect (i) our significant headcount growth in recent years, (ii) the increasing diversity of the communities around Axcelis work locations, and (iii) efforts to source and attract a more diverse candidate pool for job openings. We ensure that all hiring, promotion, compensation, and other employment decisions at Axcelis are based on individual merit and performance, and not on gender, ethnicity, or other extraneous factors.





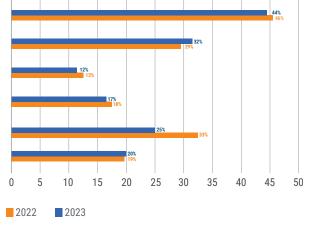
# Women in the U.S. Workforce

In 2023, Axcelis' U.S. female employee base continued to grow to 20.3% by year-end.

This is up from 19.5% at yearend 2022.

# Women in Support Service (IT, HR, Finance) Women in Sales Women in Engineering and Product Support Axcelis Leadership roles held by women (Band L2 - L4) Axcelis Executive Officers - Women Women in US Workforce

## Percentage of U.S Women Overall and by Function



As shown in the chart above, overall, the percentage of women in Axcelis' U.S. workforce increased year over year with 1% - 2% decreases in two functional areas, Engineering/Product Support and Support Services, as well as in overall leadership roles, as the percentage of women hired did not keep perfect pace with total 2023 hiring. The only significant decline in the percentage of women appears in the Executive Officer category. This decrease was not due to the loss of female executives but to an increase in the number of Executive Officer roles, from 6 at year-end 2022 to 8 at year-end 2023, as a result of our 2023 CEO and CFO transitions. Consequently, our two female Executive Officers represented only 25% of the group at year-end 2023, down from 33% at year-end 2022.

The 2023 LeanIn.Org and McKinsey & Company Women in the Workplace study reports that for the ninth consecutive year, only 87 women are promoted from entry-level positions to managers for every 100 men that are promoted. The number drops to 73 for women of color. Axcelis hopes to continue gradually increasing the overall level of female leadership in the Company, building a pipeline of women leaders for senior management roles.

Finding qualified female candidates for many of the functional groups at Axcelis is challenging, given that the number of women who obtain technical and scientific degrees in fields relevant to Axcelis is significantly below the number of men. The National Center for Science and Engineering reported that while women earn 50% of all STEM bachelor's degrees, they are slightly underrepresented in STEM advanced degrees. Women represented 46% of all STEM master's degrees and 41% of STEM doctoral degree recipients in 2020 (National Center for Science and Engineering Statistics, NSF 23-315). Women were underrepresented at all levels of degree recipients in physical and earth sciences, mathematics, computer science, and engineering.

This academic underrepresentation follows through into the workplace. In 2021, among the college-educated workforce in science and engineering occupations, women were much more prevalent in social science roles (61% of social and related scientists were women) than in engineering roles (16% were women) (National Center for Science and Engineering Statistics, NSF 23-315).

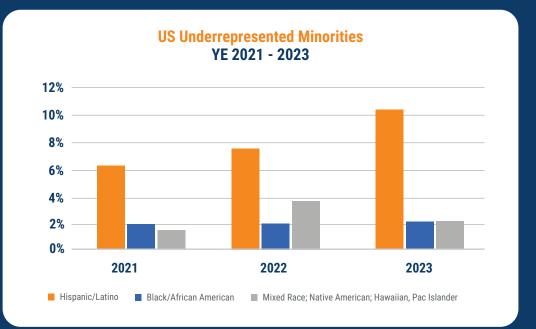
The U.S. Census Bureau reported in the 2021 Annual Social and Economic Supplement that while men and women are almost equally represented in the total workforce (52% men to 48% women), gender equality is not seen in the STEM workforce. The Census Bureau reports that in 2021, men represented a significantly greater share of STEM occupations: 65% men to 35% women. Women's engagement in the engineering, physical, and software science skills that Axcelis requires is even lower. In 2022 the U.S. Census Bureau reported that 13% of Computer Hardware Engineers, 9% of Electrical Engineers, and 10% of Mechanical Engineers were women.

Axcelis will continue to prioritize our efforts to engage in robust outreach and sourcing strategies to encourage female candidates to apply for our technical and leadership positions, and to ensure that Axcelis is a welcoming workplace for employees of all backgrounds.



Minority racial and ethnic groups constitute a substantial portion of the U.S. working-age population. When we compare the racial/ethnic identities of Axcelis U.S. employees to the most current U.S. Census estimates (July 2023), it is apparent that our U.S. employees who identify as Hispanic/Latino, Black/African American, and other non-White, non-Asian racial and ethnic groups represent lower percentages of Axcelis employees than are present in the overall U.S. population. Asians, while a minority of the U.S. population (at 6.4% per U.S. Census estimates), are well represented at Axcelis, comprising 25% of our U.S. workforce at year-end 2023. Based on this data, Axcelis considers Hispanic/Latino, Black/African American, and other non-White, non-Asian racial and ethnic groups to be underrepresented minorities (URMs).

Comparing year-end 2023 to year-end 2022, the total percentage of URMs in Axcelis' U.S. workforce continued to rise (3%), with URMs currently comprising 16% of the Axcelis U.S. workforce:



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As with women, there is a limited population of URMs with backgrounds that would qualify for many of our technical roles. The National Science Foundation reported that in 2021, 9% of the U.S. STEM workforce was Black, and 15% was Hispanic or Latino. The report also observed that of STEM bachelor's degrees earned in 2020, Black students only accounted for 9% and Hispanic students 17% of the total (National Center for Education Statistics, Integrated Postsecondary Education Data System, Completions Survey, 2020).

Axcelis' progress is in line with increasing diversification in the STEM workforce. According to the "Diversity and STEM: Women, Minorities, and Persons with Disabilities 2023" report, published by the National Center for Science and Engineering Statistics, Hispanics, Blacks, and Native Americans or Alaska Natives represented nearly a quarter (24%) of the STEM workforce in 2021, up from 18% in 2011.



We are proud of the diversity represented by the Axcelis Board of Directors, which includes:

**Jorge Titinger**, our Non-Executive Chairperson, is an experienced semiconductor equipment and electronics executive and a Hispanic American,

**Dipti Vachani**, a female executive at Arm Limited, which designs energy-efficient system-on-a-chip central processing units for cell phones and other applications, is an Asian American,

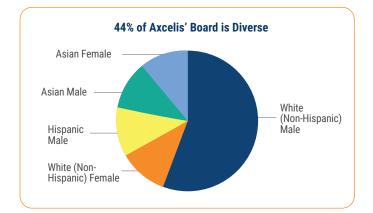
**Jeanne Quirk**, a female executive at TE Connectivity, a manufacturer of connectivity and sensor solutions for a variety of industries, and

Dr. Tzu-Yin Chiu, an experienced semiconductor company CEO, is an Asian American.

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The ethnic/racial diversity of the Axcelis Board is higher than our industry benchmark, but our Board gender diversity is slightly below the industry average. ISS Corporate Solutions reported that in September 2023, directors who are Black, Asian, Hispanic, Middle Eastern, or from another non-white ethnic group, represent 21% of the Boards of GICS 4530 Semiconductors & Semiconductor Equipment Russell 3000 companies, on average (ISS Corporate Solutions, "Board Diversity Benchmarking," October 2023). In comparison, 33% of Axcelis' nine-member Board of Directors are racial/ethnic minorities, meaningfully higher than that industry average.

In terms of gender diversity, ISS reports that the GICS 4530 Semiconductors & Semiconductor Equipment Russell 3000 Boards have 28% female directors, on average. The Axcelis Board currently has two female directors, representing 22% of the full Board. Although since May 2024 Axcelis no longer has a female CEO or Board Chairperson, we have one Board committee chaired by a female director.



# What We Are Doing

#### **Establishing Diversity Metrics and Goals**

In November 2020, the Axcelis Board formally delegated responsibility to the Compensation Committee to oversee the company's workforce diversity efforts. With the guidance of the Board, management is now tracking specific demographic information related to the number of women and URMs in our workforce.

The five-year (2025) goals set in November 2020 are outlined below. The chart shows our progress from year-end 2020 through year-end 2023. URMs, at 15.6% of U.S. employees at year-end 2023, was up almost 100% over the year-end 2020 level, significantly surpassing our goal of 10% of U.S. employees. Women, at 20.3% of U.S. employees at year-end 2023, is more than 20% higher than we were at year-end 2020, surpassing our goal. The other four metrics were all above 2020 year-end levels at the end of last year, although two were down from year-end 2022 and one was flat to year-end 2022. We saw continuing progress year-over-year on URMs in leadership, which was 67% higher than at year-end 2020, but still slightly short of our goal.

Us Employee Population	2025 Goals set in 2020	2021 YE	2022 YE	2023 YE	2024 YE	Status Vs. Goal
Female employee population	20%	16.6%	18.3%	19.5%	20.3%	Passed Goal
Engineering and Product Support Female population	15%	11.0%	11.3%	12.5%	11.8%	Dip in progress
Women in leadership (bands L2-L4)	20%	15.0%	15.4%	18.5%	17.3%	Dip in progress
URM employee population	10%	8.0%	9.9%	13.4%	15.6%	Passed Goal
Engineering and Product Support URM population	8%	4.0%	3.8%	6.7%	6.7%	Flat
URM in leadership (bands L2-L4)	5%	2.7%	3.1%	4.4%	4.5%	Progress to Goal

Our Board receives annual reports on our progress against these goals as part of the Axcelis Talent Review, the company's talent management and succession-planning process. We expect our Board to adopt new five-year goals for 2030.

## **Growing Diversity Through Hiring**

We view hiring requisitions as opportunities to increase diversity. The growth of our business has led to new positions at Axcelis. Our 2023 employee hiring activities showed relatively strong performance in attracting women and URMs:

#### **Regular U.S. Jobs**

- 22% (69) of the 309 U.S. jobs were filled with women (up from 20% in 2022).
- 27% (82) of the 309 U.S. jobs were filled with URMs (up from 18% in 2022).

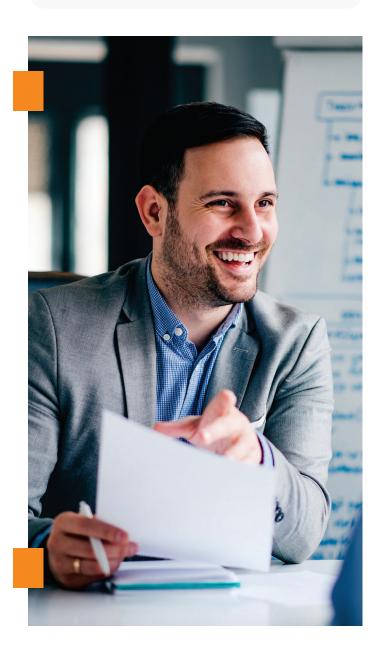
#### Entry Level Jobs

We recognize the importance of having entry level positions available to attract a more diverse candidate pool, and we regularly hire college students to work as co-ops and interns at Axcelis for a semester. Women represented 20% of our 2023 co-op/interns. Overall, <5% of co-ops/ interns self-identified as a URM.

We are pursuing some specific initiatives to improve our diverse hiring and will:

- Continue to review our selections for college recruitment and college job postings,
- Participate in the Society of Women Engineers' WE24 career fair, the world's largest career fair for women engineers and technologists,
- Participate in the Society of Women Engineers' gender equity and benchmarking program, Advocates for Empowerment,
- Fund co-op and intern positions to increase opportunities at Axcelis,
- Partner with military talent recruiting agencies for field service positions to hire former military personnel, and

Emphasize work location/work schedule flexibility in job postings, and during the interview process we will open the possibility of engaging more women with caregiving responsibilities and more applicants in geographic areas with higher URMs. The McKinsey/LeanIn.Org 2022 Women in the Workplace Report indicated 49% of women leaders said that flexibility was one of the top three things they considered when deciding whether to join or stay with a company.



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#### **Creating an Inclusive Culture**

To attract and retain a diverse workforce, it is critical that our work environments are welcoming and inclusive. The McKinsey/LeanIn.Org 2022 Women in the Workplace Report indicated that women leaders were more than 1.5x as likely as men at their level to have left a previous job because they wanted to work for a company that was more committed to Diversity, Equity, and Inclusion (DEI). We have identified initiatives to enhance our development of the desired culture, including:

- Providing additional support for highpotential employees through mentorship and career development training,
- Supporting Employee Resource Groups, such as Axcelis Women's "RISE,"
- Engaging a consultant to assist in the development of our DEI strategy and messaging, and
- Ensuring employees receive positive reinforcement about our culture of inclusion.

A foundational step in creating an inclusive culture is to avoid any discriminatory behavior. Axcelis has adopted a broad anti-discrimination policy that references the following personal characteristics as "protected":

- Race or color
- Nationality, national origin, or ancestry
- Seligion or creed
- O Physical or mental disability
- Sender or sexual orientation
- Medical condition or physical appearance (including pregnancy)
- Active military or veteran status
- ⊘ Age
- Senetic information
- Any other factor protected by federal, state, or local law

All global employees must take biennial training courses on harassment. We also provide extensive training for managers on how to make hiring, promotional, compensation, and termination decisions in objective and unbiased ways. In the future, we expect to expand our employee training on issues of DEI.



#### **Pay Equality**

One outcome of discrimination can be a pay gap. Axcelis annually reviews all employee compensation against market medians for their position, and periodically undertakes reviews comparing base pay of female and URM employees against market and peer compensation data.

#### **Talent Review and Succession Planning**

Axcelis conducts an annual talent review process, which involves an evaluation of current leadership, identification of high-potential employees, the establishment of development action plans for individuals and for functional groups, and succession planning. Individual action plans may incorporate leadership development training, 360 evaluations, exposure to new skills, and participation in mentoring relationships.

#### **Board Searches**

The Axcelis Board currently has two female directors, two Asian/South Asian directors, and one URM director. As we engage in future Board searches, we will seek Board candidates who have deep experience that is relevant to the international business issues that Axcelis faces. We will look to fill our Board requirements from qualified candidates, considering all aspects of diversity.

#### **Beyond Axcelis**

We recognize that the conditions needed to achieve a representative workforce will not happen unless we invest differently in future generations. We need to encourage women and URMs to pursue STEM and business education and careers. Axcelis is engaged with and provides support to a variety of initiatives that are designed to create opportunities for individuals to enter, and succeed in, technical careers. These include the SEMI Workforce Development Committee, the Boston Museum of Science, the Maria Mitchell Women in Science Symposium, the Massachusetts Bay United Way, the North Shore YMCA, and others.

Axcelis' commitment to gender diversity and URM representation within the global workforce is reflective of its alignment with SDG-5 (Gender Equality), SDG-8 (Decent Work and Economic Growth), and SDG-10 (Reduced Inequalities). Further information on Axcelis' SDG alignment can be found in the Annex.

# Recruiting and Managing a Global and Skilled Workforce

Our business depends on our ability to attract and retain qualified, experienced employees, including foreign nationals. U.S. employment of foreign nationals requires compliance with U.S. immigration laws, which Axcelis strictly adheres to. Axcelis also participates in the U.S. government's E-Verify program to ensure all U.S. employees are authorized to work in the country. Employment of individuals outside of the U.S. is required to meet our business and customer obligations. Axcelis manages risks in offshore employment (for example, compliance with non-U.S. laws and regulations) by employing experienced Human Resources and Finance staff in the applicable country and accessing external legal counsel and other experts, as needed.

# Axcelis' Commitment to Learning and Development

Axcelis is committed to developing a culture of learning and development. We recognize that each employee has different skills, strengths, and perspectives. Our goal is to create a culture that respects and capitalizes on these differences. We support our employees by helping them learn, grow, and succeed, so they can contribute to and shape the future success of Axcelis. By linking our talent and learning strategy to Axcelis' Strategic Plan, we will effectively serve our customers and drive tangible business results, positively impacting our revenue growth plans. To continue competing in a global environment, Axcelis is committed to continually:

- Invest in our employees' career growth by developing our internal talent,
- Develop our leadership pipeline by identifying the next generation of leaders at Axcelis, and
- Attract and retain world-class and emerging talent.

We will identify the skills and knowledge needed for a successful future. Through a learning model based on 70% work experiences, 20% feedback and relationships, and 10% formal training, Axcelis will provide mentoring, management, and leadership programs, tuition reimbursement benefits, and other development opportunities, learning tools, and resources to all Axcelis employees. Through our programs and resources, all Axcelis employees will have the tools they need to be successful in their current and future roles.

# Axcelis Cares - Our Charitable Activities and Scholarships

The mission of Axcelis Cares is to develop, maintain, and implement a strategy of community involvement for Axcelis within the communities in which we do business. Axcelis Cares is comprised of three components:



- The Community Outreach Committee organizes events such as Angel Tree, Beverly Red Cross Hero's Award, Pathways for Children Book Drive, Food Drive for Beverly Bootstraps, JP Morgan Corporate Challenge Team, Step Up for Colleen 5K, and the United Way Campaign.
- So The Corporate Sponsorship Committee supports organizations such as the Peabody Essex Museum, Leap for Education, and Community Giving Tree.
- The Scholarship Committee provides tuition assistance to two dependents of Axcelis employees who are graduating high school seniors.

Specific organizations and programs supported by Axcelis' headquarters in 2023 are discussed below. Other Axcelis locations around the globe also participate in local charitable programs.

#### **Beverly Bootstraps**

Axcelis maintains a strong commitment to Beverly Bootstraps, a non-profit organization in Beverly, Massachusetts, our headquarter location. Beverly Bootstraps offers emergency and long-term assistance including access to food, housing stability, adult and youth programs, education, counseling, and advocacy. Axcelis has supported Beverly Bootstraps for 20 years. Over the course of 2023, a team of volunteers from across Axcelis worked to support their Winter Wishes Holiday Gifts program that provides two families with new clothes, games, and toys.

#### **Axcelis Scholarship Program**

The Axcelis Scholarship Program has for almost 20 years provided tuition assistance to the dependents of Axcelis employees who are selected in an application process. In 2023, the program provided a scholarship of \$8,000 to two winning students, to be funded at the rate of \$2,000 per year. Since the inception of the Scholarship Program in 2004, Axcelis has provided scholarships to 40 students.

#### **Salvation Army Angel Tree**

For 18 years, Axcelis has sponsored the Massachusetts Salvation Army's Angel Tree program, which provides holiday presents for children of needy families during the holidays. Axcelis Cares sponsors the program and Axcelis employees generously purchase gifts for all the little "angels."





# Appendix 1 TCFD Index

TCFD – METRICS & TARGETS	AXCELIS RESPONSE
a. Disclose the metrics used by the company to assess climate- related risks and opportunities in line with its strategy and risk management process	<ul> <li>Axcelis' approach to climate-focused metrics is informed by its climate risk assessment (methodology, scenario analyses, statistical analysis), as well as its ERM.</li> <li>Axcelis' ERM allows us to evaluate and prioritize emerging and ongoing risks, including climate risks, which could be substantive depending on probability, magnitude and anticipated time horizons. Climate change risk is separately identified from environmental and occupational health and safety compliance risks, given its higher uncontrollable factors. Trends and mitigation actions on these higher risks are reported to the Board quarterly.</li> <li>The first phase of the climate risk assessment identified high-level climate risks, transition risks, and opportunities across Axcelis' core operations and value chain. It included an analysis of physical risks (climate-related hazards) and transitional risks (modeled from 2020 to 2050) along Axcelis' operations as well as scenario analyses (IPCC RCP 2.6, 4.5 and 8.5 scenarios) that consider impacts over the short-term (0-5 years), medium-term (5-10 years), and long-term (10-30 years).</li> <li>Climate-related risks were assessed using statistical analysis and the likelihood of various climate-related events using CMIP5 models in Axcelis' primary geographic locations (facilities and offices) within the United States, Europe and Asia-Pacific.</li> </ul>
<b>b.</b> Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	Please refer to the detailed greenhouse gas emissions information reflected in Section I, "Climate and Environment".
<b>c.</b> Describe the targets used by the company to manage climate-related risks and opportunities & performance against targets.	<ul> <li>Axcelis has established the following targets:</li> <li>Axcelis committed to set science-based GHG emission reduction targets in line with the SBTi. Axcelis embarked on a path to net zero by 2050, reducing Scope 1 and 2 emissions to reach Science Based Targets (&lt; 1.50 C) by 2030.</li> </ul>

#### **TCFD – GOVERNANCE**

**a.** Describe the board's oversight of climate-related risks and opportunities.

#### **AXCELIS RESPONSE**

- Axcelis' Board of Directors oversees the climate change risks and environmental, health and safety using our Enterprise Risk Management (ERM) system.
- The ERM system is a method by which management assists our Board in meeting its risk oversight responsibility. Annually, management seeks to identify risks, including climate change risks and opportunities that influence our business, and rank them by potential severity and by susceptibility of the risk to control by the company. Risks with higher severity, or greater uncontrollable factors, are re-assessed by management on a quarterly basis.
- Climate change risk is separately identified from environmental and occupational health and safety compliance risks, given its higher uncontrollable factors. Trends and mitigation actions on these higher risks are reported to the Board quarterly.
- The Axcelis board receives a quarterly scorecard from the VP of EHS and Facilities on the progress of Axcelis' sustainability objectives, including emerging climate-related risks and opportunities, progress on climate and energy goals, and relevant initiatives across the value chain. Escalation of climate-related issues are managed through this process and within the ERM framework. This ESG report is also provided to the Board each year.

#### TCFD – STRATEGY

 Describe the climate-related risks and opportunities the company has identified over the short, medium, and long term.

#### **AXCELIS RESPONSE**

Axcelis engaged an independent consulting firm to conduct a climate risk assessment based on an analysis of physical risks and transitional risks (modeled from 2020 to 2050) along our value chain as well as scenario analyses (IPCC pathways) that consider impacts over the short, medium, and long-term.

Axcelis defines timeframes as:

- Short-term: 0-5 years
- Medium-term: 5-10 years
- Solution Long-term: 10-30 years

Description of climate-related issues potentially arising across timeframes:

## Physical Risks:

- As a global company with a geographic footprint covering the United States, Europe, and Asia-Pacific, Axcelis' scope of exposure to physical risks is projected to vary geographically and temporally across the value chain and various scenarios.
- The severity of potential impact varies by geographic location. Axcelis' headquarters, warehouse, and operational facilities (in the U.S. and South Korea) face limited to moderate exposure to key hazards such as increased precipitation, storms, flooding, and extreme heat, based on short- to long-term scenarios.
- Axcelis' core operational facilities face lesser exposure to extreme climate scenarios when compared to secondary office locations (in Arizona, California, Oregon, Texas), which face increased medium- to long-term risk due to key hazards such as extreme heat, wildfires, and earthquakes. However, given limited personnel and operations in Axcelis' secondary locations, overall impact on the company's operations is limited.
- Water stress exposure is expected to increase throughout Axcelis' value chain, with the most notable impacts in Western and South/Southwest United States, southern Europe, Asia-Pacific and Southeast Asia.

TCFD REQUIREMENTS				
TCFD – STRATEGY	AXCELIS RESPONSE			
	<ul> <li>Transition Risks:</li> <li>Please refer to pages 14-15.</li> <li>Opportunities</li> <li>Please refer to pages 16-17.</li> </ul>			
b. Describe the impact of climate- related risks and opportunities on the company's businesses, strategy, and financial planning. Description of potential impact of evaluated risks and opportunities.	<ul> <li>As noted, our inaugural climate risk assessment, conducted by an independent consulting firm, sought to identify the major risks and opportunities as well as key transition factors at a high level, factoring in short, medium, and long-term horizons.</li> <li>The assessment focused on identifying high-level climate risks, transition risks, and opportunities across Axcelis' core operations and value chain. The key findings will be reflected in the annual strategic planning process as part of the overall corporate sustainability program.</li> <li>Axcelis did not identify any climate-related risks with the potential to have a substantive effect on Axcelis in the reporting year, or that are anticipated to have a substantive effect on the company in the near future. However, we will continue to assess the impact of climate risks on a continual basis within the context of our ERM and sustainability reporting.</li> <li>Furthermore, the next phase of the climate risk assessment will include more in-depth analysis of the risks and opportunities within the context of Axcelis' strategic planning, our Enterprise Risk Management system (ERM), and the next phase of our corporate sustainability program.</li> </ul>			
<b>c.</b> Describe the resilience of the company's strategy, taking into consideration different climate- related scenarios, including a 2°C or lower scenario.	<ul> <li>In an effort to build resilience in its strategy, Axcelis is taking the necessary steps to:</li> <li>Incorporate the key findings from the initial and successive climate risk assessments into its strategic planning process</li> <li>Dedicate resources to develop a climate transition plan</li> <li>Track and assess weather and climate-related trends on an ongoing basis</li> </ul>			

TCFD REQUIREMENTS	
TCFD – STRATEGY	AXCELIS RESPONSE
	<ul> <li>Adopt "climate-resilient" best practices into (business continuity, emergency preparedness, facility management) plans</li> <li>Continue developing its corporate sustainability program in line with key reporting frameworks and standards</li> <li>Engage relevant stakeholders, including customers and strategic partners, as it pursues opportunities and manages risk</li> </ul>

TCFD – RISK MANAGEMENT	AXCELIS RESPONSE
a. Describe the company's processes for identifying and assessing and managing climate-related risks.	<ul> <li>Axcelis' ERM system provides a framework to identify and assess existing and potential risks – focusing on the most significant risks.</li> <li>Annually, management seeks to identify risks, including climate change risks and opportunities, that influence our business, and rank them by potential severity and by susceptibility of the risk to control by the company.</li> <li>Risks with higher severity, or greater uncontrollable factors, are reassessed by management on a quarterly basis.</li> <li>Climate change risk is separately identified from environmental and occupational health and safety compliance risks, given its higher uncontrollable factors. Trends and mitigation actions on these higher risks are reported to the Board quarterly.</li> <li>The key findings from the climate risk assessment will be integrated into this process in order to ensure effective identification, assessment, and management of climate-related issues on an ongoing basis.</li> </ul>
b. Describe the company's processes for managing climate-related risks.	<ul> <li>Axcelis' ERM system provides a framework to identify and assess existing and potential risks – focusing on the most significant risks.</li> <li>Annually, management seeks to identify risks, including climate change risks and opportunities, that influence our business, and rank them by potential severity.</li> <li>Assess climate risks with strategic, operational, financial, legal, and compliance impacts.</li> <li>Assess climate risks that could adversely impact Axcelis' business, financial condition, and reputation.</li> <li>Assess climate risks in line with Axcelis' short, mediumterm horizons, overall targets, and sustainability program.</li> </ul>

#### TCFD – RISK MANAGEMENT

c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the company's overall risk management.

#### **AXCELIS RESPONSE**

Climate-related risks, which are reported to the board and reviewed on a quarterly basis, are integrated into Axcelis' ERM and annual strategic planning process that covers risks and opportunities related to our technology, product development, marketing strategies, customer relationships, and operations.

i.

**Appendix 2** Axcelis and the Sustainable Development Goals: Priority SDGs

	DEFINITION	SDG ALIGNMENT
,	<b>SDG 5 –</b> Achieve gender equality and	<b>Alignment</b> – Axcelis is dedicated to building and maintaining a diverse
	empower all women and girls. End all forms	workforce, fostering a culture built on the principles of inclusion and equity,

building and maintaining a diverse workforce, fostering a culture built on the principles of inclusion and equity, and maintaining a workplace free from discrimination. We strongly believe that a diversity of experience, perspectives, and backgrounds will lead to a better environment for our employees, and better products and services for our customers. Axcelis' commitment to diversity extends to our Board of Directors, our leadership team, and all teams and functions across our global locations.

**SDG 7 –** Ensure universal access to affordable, reliable, sustainable energy services for all.

of discrimination

against all women

Ensure women's

full and effective

participation and

and girls everywhere.

equal opportunities for

leadership at all levels

of decision-making in

political, economic,

and public life.

**SDG Alignment** – Axcelis is committed to ongoing investment in sustainable and renewable energy sources as part of our current and future energy mix. **Goal –** Axcelis aims for 20% of women

**GOALS AND PROGRESS** 

in the global workforce and 20% in leadership/ executive positions by 2025.

**Progress –** In 2023, Axcelis' U.S. female employee base continued to grow to 20.3% by year-end. This is up from 19.5% at year-end 2022. Women's share of 20.3% of U.S. employees at year-end 2023 is more than 20% higher than year-end 2020, surpassing our goal. The Axcelis Board currently has two female directors.

**Goal** – By 2030, Axcelis aims to purchase 100% of electricity from renewable sources.

**Progress** – In 2023, Axcelis consumed 54,110 gigajoules of purchased energy. Axcelis headquarters consumed 50,794 gigajoules of purchased energy in 2023 compared to 57,902 gigajoules of total energy consumed in 2022 - a 12.4% reduction. 100% of our 2023 energy purchase for our headquarters came from BP p.l.c. Axcelis has retired renewable energy credits from the generation of hydroelectric power in Maine equivalent to 94% of the headquarters' electricity consumption. Regarding the remaining 6% of headquarters' electricity use not covered by the retired RECs, approximately 17% is carbon-free renewable energy (hydro, solar, wind). BP purchases and retires compliance-renewable energy credits to meet the Massachusetts requirement of 32% renewable energy.

SDG

5 GENDER EQUALITY

#### DEFINITION

#### **SDG ALIGNMENT**

#### **GOALS AND PROGRESS**



**SDG 8** – Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.



13 CLIMATE

#### SDG 10 - (Reduced Inequalities):

Empower and promote the social, economic, and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion, or economic or other status.

SDG 13 - Take urgent action to combat climate change and its impacts.

**Alignment** – Axcelis is dedicated to building and maintaining a diverse workforce, fostering a culture built on the principles of inclusion and equity, and maintaining a workplace free from discrimination. We strongly believe that a diversity of experience, perspectives, and backgrounds will lead to a better environment for our employees, and better products and services for our customers. Axcelis' commitment to diversity extends to our Board of Directors, our leadership team, and all teams and functions across our global locations.

Goal – Axcelis is targeting 10% URM representation in its global workforce by 2025; and 5% executive URM representation by 2025.

Progress – URMs at 15.6% of U.S. employees at year-end 2023 was up almost 100% over the year-end 2020 level, significantly surpassing our goal of 10% of U.S. employees. The Axcelis Board currently has two female directors, two Asian/South Asian directors, and one URM director.

Alignment - Axcelis supports SDG 13 through a range of corporate sustainability activities designed to reduce emissions. We support the SDGs and the goals of the Paris Agreement, and participate in industry consortia like SEMI to help the semiconductor industry achieve net zero emissions by 2050. We are aligned with international efforts to combat climate change and openly disclose our climate change response strategies, goals, and activities to stakeholders via CDP, SBTi, and more.

Goal – Axcelis has committed to SBTi and has undertaken a carbon footprint exercise as well as a climate risk assessment exercise. As part of its overall sustainability program and SBTi obligations, Axcelis embarked on a path to net zero by 2050, reducing Scope 1 and 2 emissions to reach Science Based Targets (< 1.50 C) by 2030.

Progress - Axcelis has reduced companywide Scope 1 emissions from 5,572 metric tonnes of carbon dioxide equivalent (CO2e) in 2022 to 3,411 metric tonnes of CO2e in 2023. This constitutes a 38.8% reduction from 2022 to 2023. Axcelis headquarters' Scope 1 emissions have also decreased by 15.5% in the last year. In 2023, Axcelis' company-wide marketbased Scope 2 GHG emissions were 1,669 metric tonnes of CO2e. When normalized using total revenue of \$1.13B in 2022, total market-based Scope 2 emissions were 1.48 metric tonnes per \$1M in revenue, a decrease of 65% from the previous year.

SDG

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