



Essex Furukawa Magnet Wire LLC

Sustainability Report

SEPTEMBER 2024



Vision 2030: A Sustainable Future, Our Driving Force

As a pioneer in the magnet wire industry, Essex Furukawa stands tall on its long history of innovation and reliability. As CEO, I am proud of our global teams and especially pleased with the efforts—and results—that we are seeing from our sustainability journey. Our annual report affirms our commitment to transparency and creating a sustainable future for all.

One of the major accomplishments highlighted in the report is an impressive 29% reduction in carbon emissions. This achievement reflects our ongoing commitment to implementing sustainable practices to minimize our environmental impact. We also are proud that our carbon reduction targets were accepted by the Science Based Targets initiative (SBTi). The validation covers both Scope 1+2 as well as Scope 3 emissions, confirming the efforts to reduce our carbon footprint across the entire Essex Furukawa operations and value chain.

As part of our broader Environmental, Social, and Governance (ESG) initiatives, we made updates to our *Supplier Code of Conduct*—ensuring that suppliers adhere to strict sustainability standards throughout the supply chain. By strengthening this code, we aim to foster greater accountability among our suppliers, ultimately driving positive change across the industry.

Lastly, we've added water conservation goals this year. In recognizing the importance of responsible water management, we aim to implement measures that will reduce water consumption and promote sustainable water practices throughout our operations.

These accomplishments—and many others included—are a testament to the dedication and hard work of our employees, partners, and stakeholders who have embraced our *Vision 2030* program for a more sustainable future.



Daniel Choi
President and CEO, Superior Essex

Letter from the CEO



We remain committed to our customers, supportive of our employees, and active in our communities.”



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Company Overview

As a globally diverse powerhouse in the magnet/winding wire industry, Essex Furukawa consistently pushes the boundaries of innovation and engineering. We lead these efforts across the globe to foster lasting success for the customers we serve. Built on more than 120 years of expertise, our teams form mutually beneficial relationships with members of the automotive, commercial, residential, industrial, and energy markets. We provide the products and services they need to flourish, and in turn, inspire their customers to thrive. Our advancements in technology have been part of a decarbonization movement that is increasing reduction efforts throughout the value chain. From the newest electric vehicles, power transformers, and commercial generators, we produce the magnet/winding wire that powers the future.

Across North America, Europe, and Asia Pacific, Essex Furukawa provides a broad range of copper and aluminum magnet wire—enameled, wrapped, and extruded in both gauge and metric sizes. We are the only magnet wire manufacturer that is vertically integrated, allowing seamless design, development, sourcing, production, delivery, and availability of products on three continents.

Essex Furukawa is a global leader in magnet/winding wire product innovation and manufacturing.



Key Highlights



29%

CO₂ Reduction

Equivalent to the Sequestration Potential of 77,966 Acres of Forests Per Year¹



9%

Renewable Energy Utilized

Equivalent to 8,528 Homes' Electricity Use for One Year¹



9

Plants Achieved ZWTL to Date²



43,331 MT

Recycled²



3

Plants Achieved The Copper Mark Assurance Process

Globally Recognized Standard for Responsible Copper Production



22

Community Development Programs



90%

of Total Supply Chain Surveyed for ESG Impact Upstream

¹ EPA Greenhouse Gas Equivalencies Calculator
² Internal audit, numbers not third-party verified

A Sustainable Future, Our Driving Force

VISION 2030



Lead efforts in sustainability by reducing our waste, energy, carbon, and water footprints globally



Develop market changing products and services in partnership with, and in support of, our customers



Be a digitally savvy organization by being fully integrated, sustainably automated, and socially responsible

Essex Furukawa first announced, *Vision 2030: A Sustainable Future, Our Driving Force*, in April of 2021. It shaped the future of our business by declaring each decision, partnership, and investment we make to be driven by the common goal of creating a sustainable future. Ultimately, we look to support the needs of current generations without sacrificing the needs of future ones. Our Core Values of Green Production, Disruptive Innovation, and Agile Digitization are the pillars through which we strive to achieve this Vision.

For Essex Furukawa, Green Production is the common thread that is woven through all the Core Values. This focus positively impacts our own production and influences our supply chain. It also aligns us with our customers in support of carbon reduction targets.

The goal of Disruptive Innovation is to change the magnet/winding wire industry by introducing products, equipment, and production methods to support and drive technological advancements through the supply chain. We will develop new ways to disrupt a century-old technology to support our customers' demand for materials, products, and equipment. We will also deploy our resources to aid them in enhancing their product performance and thereby support sustainability efforts up and down the supply chain.

Our Agile Digitization goal is to become a world class, digitally savvy, company with a technology environment that seamlessly enables business in collaboration with our employees, customers, suppliers, and partners. As we move forward with *Vision 2030*, our internal teams are focused on turning data into information and providing people in production with insights to make better decisions.



Green Production

The *Vision 2030* mission for Green Production is to be the recognized leader in creating sustainable solutions within the magnet/winding wire manufacturing industry globally. We expect to meet the needs of today as well as for the future in order to support our customers and their ongoing sustainability efforts.

Green Production will meet *Vision 2030* goals by aligning with five definitive connections:

- > Achieving and maintaining Zero Waste to Landfill status at all facilities globally
- > Establishing and committing to utilizing Renewable Energy
- > Establishing and committing to Energy Reduction targets
- > Establishing and committing to Carbon Reduction targets
- > Establishing and committing to Water Conservation targets

INITIATIVE	3-YEAR GOAL (2023)	7-YEAR GOAL (2027)	10-YEAR GOAL (2030)
Zero Waste to Landfill (ZWTL)	Achieve ZWTL status at all of our plants globally	Monitor and maintain ZWTL operations globally	Monitor and maintain ZWTL operations globally
Renewable Energy¹	17% renewable energy utilized	27% renewable energy utilized	32% renewable energy utilized
Energy Reduction¹	3% energy reduction	6% energy reduction	10% energy reduction
Carbon Reduction²	N/A	N/A	Scope 1 and 2: 22.5% carbon reduction ³ Scope 3: 22.5% carbon reduction ³
Water Conservation²	N/A	N/A	5% reduction in water usage

¹ Utilized a 2019 baseline / ² Utilized a 2021 baseline / ³ SBTi validated



Zero Waste to Landfill

Continuing on a path to a sustainable future remains a focal point for Essex Furukawa. Our effort to refine green production includes achieving Zero Waste to Landfill (ZWTL) across our magnet wire plants, metals processing facilities as well as chemical processing locations. For a plant to achieve ZWTL status, at least 98% of all waste leaving the facility must be diverted from landfill as well as from the downstream material management organization accepting the waste stream.

Progress

- > 9 plant locations have achieved ZWTL status¹



Energy Reduction

Energy reduction initiatives include all anticipated reductions from Essex Furukawa plants' Scope 1 and Scope 2 energy sources (i.e., fuels and electricity) over the next 2023, 2027, and 2030 milestone years. All energy reduction calculations were benchmarked to production to show the plants increase in energy efficiency to production.

Progress

- > Achieved 1.1% reduction in energy in 2023²



Renewable Energy

Essex Furukawa defines renewable energy as clean energy that comes from natural sources or processes that are easily replenishable. Examples of renewable energy under investigation include solar, hydro, and wind power. Unlike our energy reduction goal, our renewable energy progress is based on total energy consumed. We are continually researching possibilities to implement renewable energy projects at each site, globally, to reduce our Scope 2 carbon impact as well as enable green energy production where feasible.

Progress

- > Utilized 9% renewable energy in 2023²

¹ Internal audit, numbers not third-party verified
² Compared to 2019 baseline



Carbon Reduction

In establishing our Scope 1, 2, and 3 carbon reduction goals, Essex Furukawa has clearly stated its intention to reduce greenhouse gas emissions across our global footprint. We now have a defined path to that reduction as an organization as well as in support of our customers' carbon reduction targets. Essex Furukawa has established Science Based Targets following the Greenhouse Gas Protocol and aims to meet a 22.5% reduction of Scope 1 and 2 emissions and 22.5% reduction in Scope 3 emissions by 2030. In communicating these reduction targets and progress, Essex Furukawa will be able to catalyze additional action—up and down the value chain—to reduce our holistic carbon impact on the planet.

Progress

- > Achieved 29% reduction in Scope 1 and 2 emissions in 2023³
- > Achieved 70% reduction in Scope 3 emissions in 2023³



Water Conservation

In acknowledging a responsibility to contribute to the solution of water scarcity we have set water conservation goals for the company, benchmarked to production. By implementing sustainable practices and innovative technologies, the company aims to reduce its water consumption 5% by 2030 and minimize its environmental impact. Essex Furukawa is focused on creating a positive and lasting impact on water resources by fostering partnerships with stakeholders and sharing best practices both internally and externally.

Progress

- > Newly established in 2023, will share progress in 2024.

³ Compared to 2021 baseline



Disruptive Innovation

We will measure success against our ability to create disruptive innovation in material and production methods. That means, by 2030 we want:

- > New products that do not use harmful solvents
- > Innovation of process and expansion of new production methods
- > Reduction of carbon dioxide emissions by 50% for new products and new production methods developed specifically in our global R&D Innovation Centers

In addition, we look at 2050 as an opportunity to be carbon neutral for all our new products and production methods developed in our global R&D Innovation Centers.

Essex Furukawa is committed to supporting a sustainable future for all through Disruptive Innovation. By collaborating with our customers to support the Energy, Commercial, Residential, Industrial, and Automotive markets in new technology, we can support a lower carbon economy to reduce overall impact across these industries.

We feel that our connection points internally can lead to improvements across the value chain, by being able to support:

- > The proliferation of Electric Vehicles (EVs) and support efficiencies across the transportation industry
- > The advancement of the energy & utility sectors by enabling renewable energy technology
- > The electrification of buildings through energy efficient technology
- > The efforts across multiple industries to reduce environmental impact throughout the life cycle





Agile Digitization

We view the digitization of buildings, communication, and technologies now and into the future as an opportunity to enable the interconnectivity of all infrastructure. In order to support a more sustainable world, we are taking the following measures:



FULL INTEGRATION

Full integration enables connected digital ecosystems, supports the data and supply chains that are securely connected to interoperable systems, and aligns to global industry standards



GREEN TECHNOLOGY

Through Green IT (Information Technology) as well as Green OT (Operational Technology), we are developing platforms and technologies that enable 100% e-waste recycling and power efficient operations



SUSTAINABLE AUTOMATION

Streamlining the process of data collection and generating sustainability-related metrics to leverage green recycling, enabling harmonious human-to-machine interaction



SOCIAL IMPACT

Bringing social value to the communities we serve with commitments to United Nations Sustainable Development Goals (UN SDGs)

We are expanding transformational operational analytics in a global effort to make real time, data guided decisions, thus creating operational efficiencies. We are also implementing several technologies to leverage cloud-based technology and reduce our carbon footprint.

Essex Furukawa is focused on delivering multiple accomplishments to complete our Vision 2030 mission with advanced operational technologies over the next decade, including:

- > Implementing best of breed cyber security capabilities to keep our data, information and systems cybersafe
- > Implementing agile ways of working and empowering local teams with technology & knowledge to best serve our customer's needs
- > Converging IT and OT to leverage synergies and deliver world class IT/OT capabilities to our businesses
- > Leveraging data collection of sustainability metrics to inform strategic decision making
- > Utilizing artificial intelligence and machine learning to improve efficiencies of our production systems across all facilities globally
- > Utilizing blockchain to develop supply chain transparency and end-to-end product life cycle analysis

Holistic Sustainability

To achieve our *Vision 2030* goals, Essex Furukawa has further defined a holistic sustainability approach for achieving a sustainable future. These seven petals create specific and measurable action items that will help quantify the successes as well as identify opportunities for improvement within the organization.





Accountability, Reporting, & Governance

As a corporation, Essex Furukawa places a high value on sustainability and environmental conservation. Our compliance with multiple environmental directives and regulations is a testimony to our commitment. Through consistent communication efforts of our data, goals, and metrics, we are able to establish transparency both internally and externally with our stakeholders.¹ We created a Sustainability Leadership Council to track ongoing impact reductions, develop a Corporate Sustainability Report and further our commitments to social responsibility.

Accountability

Essex Furukawa firmly believes we have a moral obligation to prioritize environmental preservation and well-being in communities in which we operate. This belief extends beyond integrating sustainability into our business operations; since each of our global locations are unique, and the specific community needs vary, we rely on each plant to determine which local initiatives will be most impactful.

Community Development

Driven by a belief in the power of collective action, we aim to create a positive and lasting impact on the communities in which we operate. Through a combination of volunteerism and monetary contributions, the company actively invests in outreach efforts to support local initiatives.

Youth development is a common priority across many of our locations. While we sponsor a range of local youth activities such as athletics, we also recognize the importance of education and have forged partnerships with schools to support mentorship programs, educational resources, and provide financial assistance to help students to overcome obstacles and reach their full potential.

In addition to supporting young people, the company is dedicated to addressing resource insecurity affecting the community. Our teams partner with local charities to donate food, clothing, and toys throughout the year. The company also hosts the Phenie Street Food Pantry on its Fort Wayne campus, which provides a vital resource for individuals and families who may not have access to sufficient food sources. The pantry is adjacent to a Little Library which aims to promote literacy by providing free access to books for readers of all ages.

We also value the dedication and bravery of local first responders. The company regularly donates to fire and police departments, supporting their efforts to keep the community safe.

¹ Essex Furukawa Magnet Wire considers a stakeholder to be an individual or group that can affect or be affected by our business; or has a vested interest in the decisions made and implemented by our leadership teams. As a privately held company with a global footprint, stakeholders can include governments or regulators, joining board members, employees, customers, suppliers, and the communities surrounding our locations.

Accountability—cont.

Environmental Stewardship

Many of our locations have chosen to invest time and service to the beautification of the surrounding areas of the community. Annual tree planting initiatives aim to expand the green canopy around our plants and have resulted in hundreds of native trees being planted over the years. Local community street and river cleanup initiatives are organized for the betterment of the areas around our facilities. Through these and additional efforts across our global footprint, Essex Furukawa aims to reduce its impact on the environment and contribute to a greener future.

Social Impact

In addition to the environmental stewardship and community development initiatives spearheaded locally by our plant teams, employees are encouraged to give back to specific causes that hold meaning to them.

- > **Dollars for Doers** | Essex Furukawa supports the generous spirit of volunteerism showcased by our employees. In support of those individual passions, we will give to eligible 501(c)(3) organizations a grant matching the time donated to further support causes that are important to our team.
- > **Matching Gifts** | The Matching Gifts program offers employees the opportunity to receive a matching contribution for non-profit organizations. We will match employee contributions of \$25 or more, up to \$1,500 per employee, per calendar year.

Reporting

- > **Annual Report** | We are committed to transparency through consistent communication to our stakeholders. Our third annual sustainability report supports this commitment.
- > **Carbon Disclosure Project (CDP)²** | Since 2010, Essex Furukawa has been reporting metrics to customers through the CDP—a global disclosure system for environmental transparency of companies.
- > **EcoVadis²** | Since 2013, Essex Furukawa has been reporting to many customers through EcoVadis—an ESG assessment tool for evaluation of a company's integration of sustainability into business.
- > **Environmental Certifications** | Many of our plants around the world have received environmental certifications. Details can be found in the Appendix.
- > **The Copper Mark Partnership** | The Copper Mark is an assurance framework to promote responsible production practices within the copper industry. Superior Essex, parent company of Essex Furukawa, became the eighth corporate partner of The Copper Mark in May 2021.
- > **The Copper Mark Semis-Fabricator Pilot Certification** | In June of 2024, three of our North American plants achieved The Copper Mark Assurance Process—Fort Wayne, IN, Franklin, IN and Columbia City, IN.

² Both CDP and EcoVadis are reported at the Superior Essex parent company level.

Reporting—cont.

> **UN Sustainable Development Goals Alignment |**

The UN SDG program was launched in 2015 as part of its 2030 Agenda for Sustainable Development and includes 17 Sustainable Development Goals. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth—all while tackling climate change and working to preserve our oceans and forests.

> **Vision 2030 Goals |** Essex Furukawa is working towards achieving waste, energy, carbon, and water reduction goals while increasing renewable energy usage for the 2023, 2027, and 2030 milestone years.

Governance

Essex Furukawa has earned the reputation of a company with the highest integrity—producing and delivering quality products with outstanding customer service. We are proud not only of what we are accomplishing, but of how we are achieving success. To protect this reputation, we continually strive to serve the best interests of our customers, employees, and all stakeholders, while behaving as a responsible corporate citizen. This commitment requires, among other things, that we act with the highest ethical and legal standards.

Our commitment to the highest standards of integrity begins with ensuring that everyone across Essex Furukawa understands our core values—values that define how we conduct ourselves. These values are the foundation of our *Code of Ethics*. Additional information and guidance is available in our *Standards of Business Conduct*.



Governance—cont.

Policies



Supplier Code of Conduct

We've updated our *Supplier Code of Conduct* establishing standards to ensure that working conditions in our supply chain are safe and that workers are treated with respect and dignity. It also established an understanding that business operations are environmentally responsible and conducted ethically. Our supply chain partners must operate in full compliance with the laws, rules and regulations of the countries in which it operates, but furthermore must draw upon internationally recognized standards to advance social and environmental responsibility and business ethics.



Human Rights Policy

Essex Furukawa, including its subsidiaries, are committed to acting with integrity in everything we do. We are dedicated to conducting business in a manner that respects, protects, and supports the advancement of human rights around the globe. We strive to uphold the global standards outlined in the United Nations' Universal Declaration of Human Rights for responsible, integrity-based business, including non-discrimination, equal opportunity, the freedom to associate and bargain collectively, the elimination of modern slavery, human-trafficking and harmful or exploitative forms of child labor.



Conflict Minerals Policy

Essex Furukawa, including its subsidiaries, supports the humanitarian goal of ending violence in the Democratic Republic of Congo (DRC) and is committed to the responsible sourcing of conflict minerals throughout its supply chain. Accordingly, Essex Furukawa has adopted a conflict minerals policy and expects all of its suppliers to adopt a similar policy and meet the expectations set forth herein. In support of this policy, Essex Furukawa will only purchase products that contain DRC conflict free minerals.³ Essex Furukawa has conducted due diligence regarding all of the products it manufactures and distributes to determine the presence of any conflict minerals and where they are sourced.



Environmental Policy

It is the established policy of Essex Furukawa to conduct its affairs in an environmentally responsible manner. We are committed to reduce the environmental impacts of our activities, products, and services to preserve and protect the natural environment including the air, water, land and other natural resources.

³ "DRC conflict free" means that a product does not contain conflict minerals necessary to the functionality or production of that product that directly or indirectly finance or benefit armed groups as defined in SEC Rule 13p under the SEC Act of 1934.

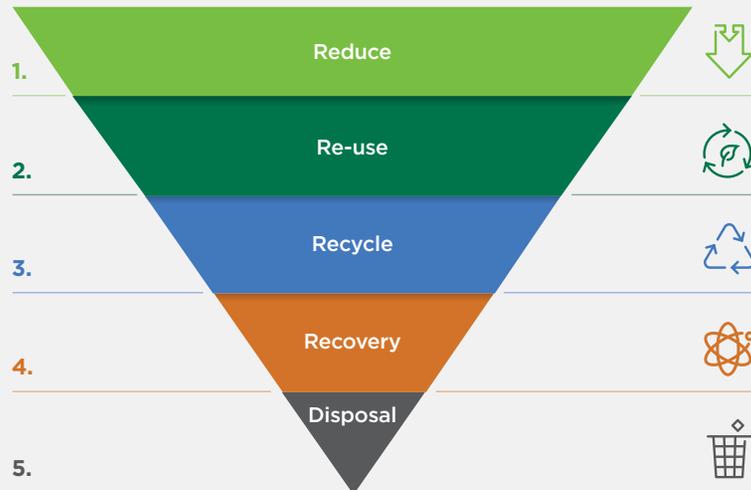
Governance—cont.



Waste Mitigation Hierarchy

Essex Furukawa is committed to holistic sustainability and understands the responsibility to consider the potential impact our manufacturing processes may have on the environment.

To ensure all waste streams are handled responsibly, an annual Zero Waste to Landfill audit is conducted at each plant. Furthermore, we adhere to the following comprehensive steps for all waste reduction:



Pollution Mitigation Hierarchy

Essex Furukawa established the following prioritized protocol in an effort to address potential impact of pollutants from our manufacturing processes and avoid biodiversity loss. It is a framework designed to reduce the negative impact of hazardous, non-hazardous, and inert waste on the environment as well as positively contribute to community health through avoidance, minimization, restoration, and offsets.

- > **Avoid** | By designing out—or substituting for—harmful chemicals and raw materials we can *avoid* potential negative impacts.
- > **Minimize** | Our ability to *minimize* pollutants emitted during the production of our products will also reduce potential impact on the surrounding areas.
- > **Restore or Rehabilitate** | Together, we can *rehabilitate* or *restore* impacted environmental areas and communities affected by pollutants.
- > **Offset** | As a last option, we attempt to *offset* any impacts that could not be mitigated through the first three initiatives.



UN SDG Partnership

Essex Furukawa has aligned sustainability efforts with those of the UN Sustainable Development Goals, committing to 12 out of the 17 UN SDGs.¹ This partnership enables our organization to identify common purposes and opportunities for action with other stakeholders, while collaborating to achieve a better and more sustainable future for all.

¹ Committed at the parent company level as Superior Essex.

<p>Goal 3</p>	<p>GOOD HEALTH AND WELLBEING</p> <ul style="list-style-type: none"> • Environmental Policy • Food Pantry and Little Library • River Cleanup in Japan • Tree Planting in Suzhou • Employee Work-life Balance Programs 	<p>Goal 5</p>	<p>GENDER EQUALITY</p> <ul style="list-style-type: none"> • Human Rights Policy • Supplier Code of Conduct 	<p>Goal 6</p>	<p>CLEAN WATER AND SANITATION</p> <ul style="list-style-type: none"> • The Copper Mark • Environmental Policy • Torreón Grey Water Reuse • River Cleanup in Japan • Water Conservation goals
<p>AFFORDABLE AND CLEAN ENERGY</p> <ul style="list-style-type: none"> • Renewable Energy Goals 	<p>Goal 7</p>	<p>DECENT WORK AND ECONOMIC GROWTH</p> <ul style="list-style-type: none"> • The Copper Mark • Disruptive Innovation • Human Rights Policy • Supplier Code of Conduct 	<p>Goal 8</p>	<p>INDUSTRY, INNOVATION AND INFRASTRUCTURE</p> <ul style="list-style-type: none"> • Energy Reduction Goals • Renewable Energy Goals • Disruptive Innovation • SAF Partnership with Delta Air Lines 	<p>Goal 9</p>
<p>Goal 10</p>	<p>REDUCED INEQUALITY</p> <ul style="list-style-type: none"> • Human Rights Policy • The Copper Mark • Employee Career Growth Programs • Supplier Code of Conduct 	<p>Goal 11</p>	<p>SUSTAINABLE CITIES AND COMMUNITIES</p> <ul style="list-style-type: none"> • Environmental Policy • Air Permitting • Disruptive Innovation • Torreón Grey Water Reuse • Tree Planting in Suzhou • The Copper Mark 	<p>Goal 12</p>	<p>RESPONSIBLE CONSUMPTION AND PRODUCTION</p> <ul style="list-style-type: none"> • The Copper Mark • ZWTL • Accountability & Reporting • Supplier Code of Conduct • Torreón Grey Water Reuse • Water Conservation Goals
<p>CLIMATE ACTION</p> <ul style="list-style-type: none"> • Energy Reduction Goals • Renewable Energy Goals • Carbon Reduction Goals • Tree Planting in Suzhou • Water Conservation Goals 	<p>Goal 13</p>	<p>PEACE, JUSTICE AND STRONG INSTITUTIONS</p> <ul style="list-style-type: none"> • Human Rights Policy • The Copper Mark • Supplier Code of Conduct 	<p>Goal 16</p>	<p>PARTNERSHIPS FOR THE GOALS</p> <ul style="list-style-type: none"> • Alignment with 12 of the 17 UN SDGs 	<p>Goal 17</p>



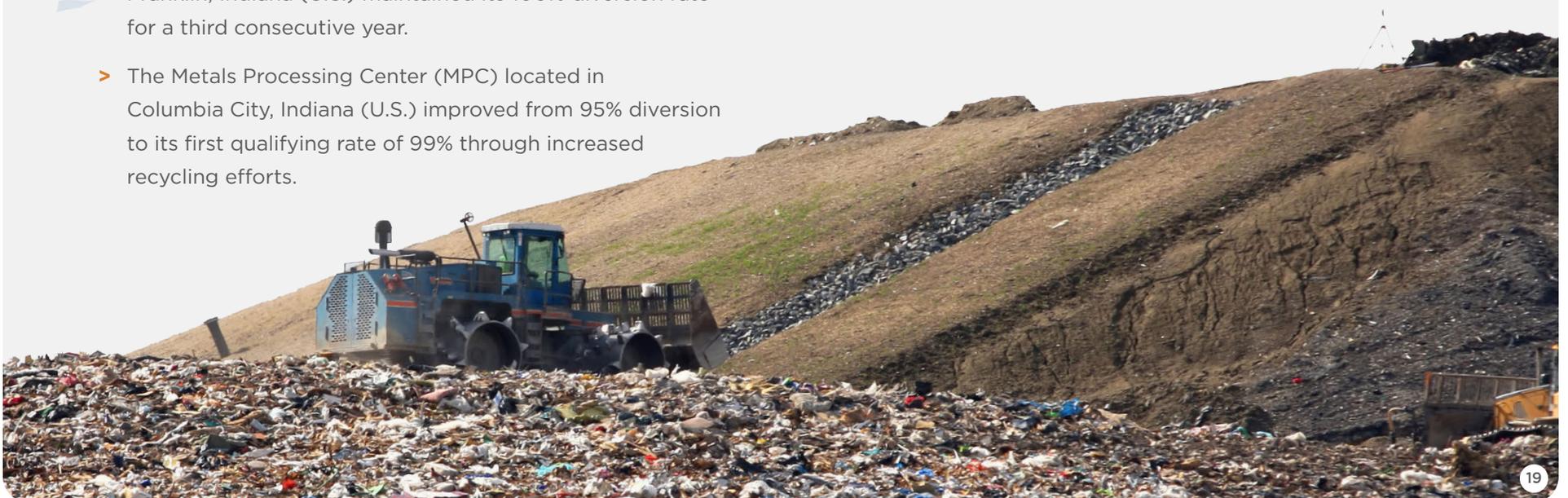
Zero Waste to Landfill

The Essex Furukawa regional teams completed a Zero Waste to Landfill (ZWTL) assessment for 2023 and is awaiting verification from an independent, third-party. The internal assessment found that four plants in North America, three in Europe, and two in the Asia Pacific region achieved a level required for ZWTL designation. Six of our plants were found to have 100% diversion rates as Bramsche (Germany) improved over its 99% rating last year.

Numerous plants in North America took a step forward this year as the cumulative diversion rate went from 95% to 97%. The seven locations combined to divert just over 31,000MT of waste.

- > Franklin, Indiana (U.S.) maintained its 100% diversion rate for a third consecutive year.
- > The Metals Processing Center (MPC) located in Columbia City, Indiana (U.S.) improved from 95% diversion to its first qualifying rate of 99% through increased recycling efforts.

- > Torreón (Mexico) and Fort Wayne, Indiana (U.S.) both achieved a 98% diversion rate, maintaining their ZWTL status.
- > Simcoe (Ontario, Canada) saw a reduction down to 97%, losing its status, while the Chemical Processing Center in Fort Wayne, Indiana (U.S.) improved its diversion rate to 96%.
- > Additionally, the Franklin, Tennessee (U.S.) Magnet Wire plant was found to have a diversion rate of 86% on its ZWTL assessment, which was an improvement over the last assessment.



European plants in Serbia and Germany all maintained Zero Waste to Landfill status during the latest evaluation cycle.

- > Zrenjanin (Serbia) retained its 100% diversion rate for the third year.
- > Bad Arolsen (Germany) maintained its 100% diversion rate as well.
- > While Bramsche (Germany) also improved to 100%.

The plants in the Asia Pacific region have had two locations retain the ZWTL status.

- > Kameyama (Japan) as well as Suzhou (China) both maintained the Zero Waste to Landfill distinction, each achieving 100% diversion for the second year in a row.
- > Malaysian plants in Penang and Kuala Lumpur continue to work toward achieving ZWTL status having both increased their diversion rate over last year. Penang was assessed at 97%—up 5%—with Kuala Lumpur climbing a percent to 96%.

Cumulatively, Essex Furukawa achieved a 98% diversion rate globally achieving the Zero Waste to Landfill distinction. It diverted over 45,000MT from the landfill.





Water Conservation

Essex Furukawa believes in holistic sustainability and understands that it is an ever-changing landscape. As such, we are proud to have added our commitment to water conservation. As a responsible corporate citizen, we also recognize the importance of protecting local water supplies to ensure the long-term viability of the communities in which we operate. By understanding the critical link between water scarcity and public health, the company aims to take proactive measures to address this pressing issue. Water scarcity is a growing concern that affects millions of people globally, posing a threat to public health, food security, and economic development.

Collectively, we acknowledge our responsibility to contribute to the solution and set new water conservation goals for the company. By implementing sustainable practices and innovative technologies, we aim to reduce its water consumption and minimize its environmental impact.

We have worked with our regional teams to create an action plan to achieve these goals. Our Torreón, Mexico plant has initiated a grey water project that has been so successful that local community leaders are investigating how it can be used for the municipality. A sidestream filter which aids in removing impurities and reduces water waste was installed at our Metals Processing Center in Columbia City, IN. Additionally, we have launched numerous projects across our global footprint related to our boilers and cooling towers for more efficient water use. We have also made metering and filtration upgrades.

Essex Furukawa recognizes that collaboration is key to addressing water scarcity effectively. The company is committed to working closely with local communities, governments, and stakeholders to develop comprehensive water management strategies. By fostering partnerships and sharing best practices, Essex Furukawa aims to create a positive and lasting impact on water resources.





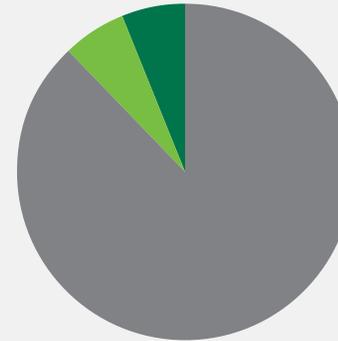
Carbon Reduction Targets

Essex Furukawa has set carbon reduction targets to provide our employees as well as partners with a clearly defined path to reduce greenhouse gas emissions as an organization. We believe that communicating our carbon reduction targets and progress will catalyze additional action up and down the value chain.

By 2030, we aim to reduce Scope 1 and 2 emissions by 22.5% from a baseline year of 2021. Additionally, we are committed to reducing Scope 3 emissions by the same percentage within the same timeframe. These goals were validated by Science-Based Targets initiative (SBTi) in November 2023. We are proud to announce a 29% reduction in Scope 1 and 2 emissions in 2023. This achievement is primarily attributed to strategic investments in renewable energy sources across China, Germany, Japan, and Malaysia.

As part of our commitment to sustainability, we conducted comprehensive lifecycle assessments (LCA's) on two of our key product types: traditional enameled copper magnet wire and extruded resin aluminum magnet wire. These assessments were performed using the cradle-to-gate method, ensuring a thorough evaluation of the environmental impact from the mine, throughout our entire production process until it leaves our facility.

As a company, we remain committed to driving sustainable practices across the wire and cable industry. By prioritizing renewable energy investments and implementing rigorous environmental assessments, we are taking proactive steps towards a greener future.



Carbon Emissions

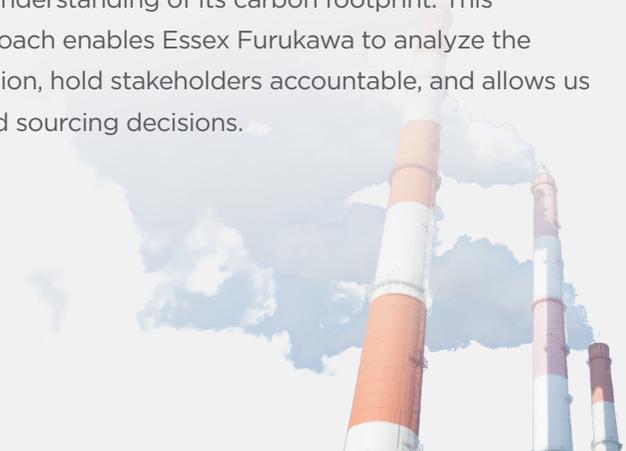
- Scope 1 - 6%
- Scope 2 - 6%
- Scope 3 - 88%

Scope 3 Emissions

We continue to analyze ESG data from our supply chain to better understand the impact on our Scope 3 emissions. In 2023, we made significant progress in determining Scope 3 emissions with more accuracy, and found it accounted for 88% of our total emissions with 77% coming directly from our suppliers.

In 2023, we reduced Scope 3 emissions by 70%, which included a 72% reduction in our upstream emissions, compared to the 2021 baseline.

By evaluating Scope 3 emissions, which encompasses indirect emissions resulting from our activities, the company gains a comprehensive understanding of its carbon footprint. This data-driven approach enables Essex Furukawa to analyze the supplier information, hold stakeholders accountable, and allows us to make informed sourcing decisions.





Responsible Sourcing

Essex Furukawa is focused on the responsible sourcing of materials used in our manufacturing processes, including that of copper. This approach is one that is actively conscious about procuring products in ethical, sustainable, and socially conscious ways. We also hold ourselves accountable to understanding the impacts of our supply chain including investigating potential risks, opportunities for improvement, and information gaps as well as communicating them to all stakeholders.

As we continue to gain detailed insights into our supply chain, we made the decision to merge the holistic pillars of Supply Chain Transparency with Responsible Sourcing for a more comprehensive approach as these insights directly affect our purchasing policies.

Furthermore, these insights have helped inform a revised *Supplier Code of Conduct*, drawing from internationally recognized standards to advance social and environmental responsibility as well as business ethics.

Green Copper

As many of the markets we serve become increasingly interested in reducing carbon impact, Essex Furukawa recognizes the need for more environmentally friendly alternatives. While the supply chain is not yet equipped to meet the broad requests for “green copper,” we are encouraged by the many advancements being made both internally and externally.

Essex Furukawa also stands out from its competitors by having a dedicated sustainability team committed to making sustainability a priority for the industry. We are ready to assist customers in navigating the new landscape of decarbonization and responsible resource use. By collaborating directly, we aim to provide tailored, reliable solutions that meet mutual sustainability objectives while ensuring the highest quality and performance standards.

Recycled Copper

- > We internally recycle all excess copper from magnet wire production at our North American plants at our Metals Processing Center—similar recycling occurs globally. Many of our suppliers also recycle copper in their cathode production.

Low-Carbon Copper

- > Our customers in Europe are now able to select a low-carbon cathode with less than 1.5kg of CO₂ emissions per kg—which is less than half of the global average presented by the International Copper Association (ICA).



Strategic Partnerships

The Copper Mark

- > The greatest influence on our carbon footprint is that of our supply chain and copper extraction. Guided by this data, we partnered with The Copper Mark in 2021 to better define what sustainable, responsible sourcing and production of copper products does to impact the value chain.
- > We expanded our partnership with The Copper Mark by participating in the Semis-Fabricator Pilot. In June of 2024, three of our North American plants achieved The Copper Mark Assurance Process—Fort Wayne, IN, Franklin, IN and Columbia City, IN.
- > Currently, 83% of the copper we source in North America is supplied from facilities which have achieved The Copper Mark and we are actively seeking additional sources globally. We are participating in the Chain of Custody Pilot—which includes some of these certified stakeholders upstream, as well as stakeholders downstream.

Waybridge

- > In an effort to improve efficiencies and reliability in our supply chain, we have invested in technology that improves logistics, provides increased predictive data, and aids in the reduction of—with the goal of eliminating—stockouts.
- > Our operating system tracks the progress of raw material shipments to our plants, which allows us to be proactive in addressing any potential supply chain issues before they affect us, and ultimately our customers downstream.

Assent

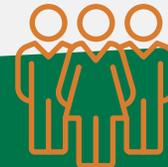
- > In an evolving Environmental, Social, and Governance (ESG) paradigm, we find it necessary to collect, aggregate, and report certain data related to sourcing activities.
- > We have contracted with a third party to engage our most critical suppliers to collect and validate this information related to our supply chain.



40
Suppliers
Surveyed



90%
of Total Spend
Represented



43%
Supplier
Response Rate



54%
Supplier ESG
Performance Score



Circular Economy

Essex Furukawa looks at a circular economy as a system that tackles global challenges like climate change, waste, pollution, and biodiversity loss. In aligning that definition with *Vision 2030* pillars, we believe it will naturally create a system that improves the life cycle of our products, contributes to our carbon reduction goals, and pairs with our customers' values.

Recycled Copper

To help eliminate waste and reduce energy consumption from the mining of raw materials, we recycle excess copper from magnet wire production in our North American plants at our Metals Processing Center—and have similar processes in place for our locations globally.

Zero Waste to Landfill

Meeting the global Zero Waste to Landfill goals of *Vision 2030* includes upcycling. There are byproducts in our production process that are diverted from landfills through partnerships with outside markets and industries that can re-use those materials.

Packaging

We regularly evaluate our packaging designs to meet the needs of our customers. That process can include reuse, refurbishment, or altogether rethinking our shipping methods—without sacrificing the security and strength required to keep products safe. It also allows us to inject additional sustainability efforts into that process.

One example of this packaging innovation comes from our teams in Europe and Asia who are embracing returnable, recycled plastic pallets which yield a higher quality, longer lifespan, and a lighter shipping weight over wooden ones. Not only does this initiative support a more environmentally conscious supply chain, but this is also a significant step in promoting a closed-loop system of reuse and minimizing waste.



Sustainability Leadership Council

The Essex Furukawa Sustainability Leadership Council (SLC) was created in 2021 to further advance the initiatives of *Vision 2030*. The SLC includes key stakeholders from across the organization, selected to offer well-rounded but differing perspectives on the business. The group meets regularly to provide insights from internal and external communications as well as make suggestions regarding the future of our holistic sustainability efforts. The goal of the SLC is to ensure that *Vision 2030* is ever-present in our decision making.

In addition to the SLC, three subcommittees were developed to focus on other key areas—Disruptive Innovation, Agile Digitization, and Responsible Sourcing.

Disruptive Innovation Subcommittee

Led by R&D leaders from around the globe, this subcommittee reports on key initiatives being developed by our MagForceX® Innovation Center teams in support of the Disruptive Innovation goals to innovate both material and production methods that are less impactful on our environment.

The group is led by our SVP of Global Operations and Global R&D. It also includes the VP of Global R&D, the VP of the North America Innovation Center, as well as the Director of the Japan Innovation Center.

Agile Digitization Subcommittee

Essex Furukawa is a digitally savvy organization that recognizes the capability of technology. We are currently implementing efficiencies and best practices across our global footprint.

Led by our Chief Information Officer, and Manager of Business Systems, this subcommittee reports on the progress made by the IT and OT teams—both of which are working towards ensuring our systems are fully integrated, sustainably automated, and socially responsible.

Responsible Sourcing Subcommittee

As part of reducing our environmental impact, this subcommittee seeks to better understand the role that our supply chain plays in accomplishing *Vision 2030* goals. It aims to reduce that impact by ensuring purchasing decisions are made in a responsible manner that considers the impact on the environment, and the community as well as ensuring quality and cost controls.

Led by the Global VP of Strategic Sourcing, this subcommittee also includes the Strategic Sourcing Analyst. The committee reports on the mapping of our supply chain, offers information on practices and performance, as well as investigates potential risks, opportunities for improvement, and information gaps in data.

More for the Future

Essex Furukawa is proud of the steps taken since the launch of *Vision 2030* and we are excited for that progress to continue long into the future. This annual sustainability report is a fundamental marker on our holistic sustainability journey. The commitment to environmental, social, and corporate governance requires transparency, benchmarking, and remaining nimble in an ever-changing landscape.

Over the next year *Vision 2030* will evolve to include additional projects designed to meet our own expectations as well as the priorities of our customers. Several such plans include:

- > Completing a third magnet wire product Life Cycle Assessment (LCA) in 2024 and two additional in 2025.
- > Consider expanding The Copper Mark certification at other global locations
- > Continued investment in renewable energy
- > A program focus on social impact
- > Begin changing our reporting structure to meet international standards



Appendix



Click to Navigate to External Resources

Resources

Several initiatives in support of *Vision 2030*, and our holistic sustainability program are underway since July 2023 including:

- > [Essex Furukawa Plants First in Magnet Wire Industry to Achieve The Copper Mark](#)
- > [Essex Furukawa Employees Join Forces to Clean Up Local Neighborhood](#)
- > [Franklin Plant Shines Light on Safety by Prioritizing National Safety Month](#)
- > [Manufacturing Manager Inspires Young People and Advocates for Skilled Trades](#)
- > [Essex Furukawa Operator Gives Back to Local Elementary Schools Through Art Workshops](#)
- > [Suzhou Employees Continue Tradition of Tree Planting to Promote Sustainability and Community Engagement](#)
- > [Celebrating International Women's Day at Torreon Plant](#)
- > [Essex Furukawa Employees in Simcoe, Canada Donate to Those in Need](#)
- > [Essex Furukawa Spreads Joy with Thanksgiving Turkey Giveaway, Food Bank Donation](#)
- > [Fort Wayne Campus Adds Bailer to Promote Sustainable Waste Management](#)
- > [Essex Furukawa Receives Carbon Reduction Goal Approvals from SBTi](#)
- > [Essex Furukawa Conducts Safety Demonstrations in Serbia](#)
- > [Fall Festival Bring Lacroix + Kress, Essex Furukawa Family Together](#)
- > [HR Coordinator Keeps Her Cool as Wildfires Heat Up](#)
- > [Torreon Plant Receives Recognition from Mexican Government for Environmental Efforts](#)
- > [Plastic Pallets Helping to Close the Loop on Circular Economy](#)
- > [Family Summer Festival Brings Joy and Entertainment to Japan Plant](#)

Visit our [website](#) and [LinkedIn](#) for the latest *Vision 2030* news and to track all our progress to date.

Sign up for our [newsletter](#).

> Assurance Process

- Keramida, Inc.
- ARCHE Advisors

> Environmental Management System (EMS) Certification

- *ISO 14001-2015*
 - Bramsche (Germany) Magnet Wire Plant
 - Bad Arolsen (Germany) Magnet Wire Plant
 - Zrenjanin (Serbia) Magnet Wire Plant
 - Kuala Lumpur (Malaysia) Magnet Wire Plant
 - Penang (Malaysia) Magnet Wire Plant
 - Suzhou (China) Magnet Wire Plant
 - Kameyama (Japan) Magnet Wire Plant
 - Torreón (Mexico) Magnet Wire Plant
 - Columbia City, IN (U.S.) Metal Processing Center
 - Franklin, IN (U.S.) Magnet Wire Plant pending, expected 2025

> Energy Management System (EnMS) Certification

- *ISO 50001-2018/2011*
 - Bramsche (Germany) Magnet Wire Plant
 - Bad Arolsen (Germany) Magnet Wire Plant

> Occupational Health and Safety Management System (OHSMS) Certification

- *ISO 45001-2018*
 - Suzhou (China) Magnet Wire Plant
 - Penang (Malaysia) Magnet Wire Plant
- *JISHA OSHMS*
 - Kameyama, (Japan) Magnet Wire Plant

Appendix—cont.

Performance Data Tables¹—Environment

Energy

> Energy Consumption | MWh/MT

	2019	2021	2022	2023
Non-renewable Fuels Purchased and Consumed	1.383	1.332	1.330	1.325
Non-renewable Electricity Purchased	0.777	0.814	0.612	0.618
Total Non-renewable Energy Consumed	2.160	2.146	1.942	1.943
Total Renewable Energy Purchased or Generated	0.004	0.003	0.216	0.196
Total Energy Consumption	2.163	2.149	2.158	2.138

Water

> Water Usage and Utilization | m

	2021	2022	2023
Total Water Withdrawn	539,155	600,052	642,014
Water Consumption	169,347	185,927	200,918
Total Water Discharged	369,808	414,125	441,096

¹ Values include air emissions, water usage, and energy consumption at our manufacturing locations only

² Following Greenhouse Gas Protocol Market-Based Approach

Emissions

> Greenhouse Gas Emissions (GHG)² | MT CO₂e

	2021	2022	2023
Scope 1	94,965	86,769	81,320
Scope 2	136,742	92,320	81,782
Scope 3 ³	3,874,458	1,300,682	1,153,575
Total (Scope 1 & 2)	231,707	179,089	163,102

> Air Emissions | MT

	2021	2022	2023
Organic Compounds	189	204	256

Waste

> Waste Diversion | MT

	2021	2022	2023
Recycled	29,647	21,825	43,331
Waste to Energy (WTE)	87	173	1,826
Landfilled	1,035	1,020	1,086
Total Diversion Rate	97%	96%	98%

Environmental Events

	2021	2022	2023
Reportable Spills or Releases of Hazardous or Toxic Chemicals	0	0	0
Number of Significant Environmental Events	0	0	0

Appendix—cont.

Performance Data Tables—Social

Employment

> Workforce Demographics

	2021	2022	2023
Number of Employees	2,060	2,128	2,171
Aged <30	19%	19%	18%
Aged 30–50	50%	51%	51%
Aged >50	31%	30%	31%
Total Women Employed	12%	13%	12%
Total Women in Leadership Positions ³	2%	2%	2%

Occupational Health and Safety

	2021	2022	2023
Total Sites Covered by an Occupational Health and Safety Management System	14%	14%	14%
Total Workplace Fatalities	0	0	0
Total Workforce Recordable Incident Rate ⁴	11.70	12.84	13.22

Local Communities

	2021	2022	2023
Total Number of Local Community Development Programs	5	8	22

³ Managers and above

⁴ International Incident Rate

⁵ Environmental compliance costs and fees

Human Rights

	2021	2022	2023
Gross Human Rights Violations	0	0	0

Performance Data Table—Financial

Financial | USD

	2023
Disclosure of Payments to Government ⁵	1,424,883

Performance Data Tables—Supply Chain

Supplier ESG Metrics

	2022	2023
Total Number of Suppliers Requested	40	40
Percent of Total Spend	80%	90%
Response Rate	29%	43%

Supplier Performance Score

	2022	2023
Environmental	42%	40%
Social	74%	69%
Governance	66%	66%
Overall	60%	54%



09-2024
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