



JFE GROUP

SUSTAINABILITY REPORT 2026

JFE

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JFE Group
SUSTAINABILITY
REPORT 2026

Message from the CEO



September 2026

Yoshihisa Kitano
Representative Director, President and CEO
JFE Holdings, Inc.

The JFE Group will play an indispensable role in supporting people's daily lives, driving sustainable development, and ensuring safe, comfortable lives for all.

JFE Group's Aspiration

The business environment is becoming increasingly complex, affected by global concerns such as the intensifying effects of climate change, declining biodiversity, and growing constraints on resources and energy. While Japan's demand structure continues to change, we must urgently address geopolitical risks overseas, including the spread of protectionism and instability in the Middle East.

Meeting these social challenges is at the heart of the JFE Group's mission. We must place top priority on addressing climate change and other environmental issues, as well as strengthening our human capital. While the steel industry supplies essential materials for the development of society, it also emits significant volumes of greenhouse gases. We believe, however, that our role in this industry positions us to advance decarbonization worldwide. By decarbonizing the steel industry and providing the high-performance materials and solutions that support the decarbonization of every sector, including automotive, construction, energy, and infrastructure, we will fulfill our mission to drive green transformation (GX) across society.

The JFE Group is making progress toward realizing its JFE Vision 2035, centered on the world's most innovative technology. We will spearhead the development of innovative technologies, such as innovative electric arc furnaces, hydrogen-based direct

reduction ironmaking, and carbon-recycling blast furnaces, to achieve carbon neutrality by 2050 and be at the forefront of efforts to realize a carbon-neutral society. Advancing initiatives to achieve carbon neutrality while balancing our environmental investments and financial soundness is essential for creating both environmental and economic value.

We will generate new value unique to the JFE Group by strengthening our environmental initiatives together with the human capital, technological development, and governance that support them. Specific efforts include strengthening our governance and technological development by transitioning to a company with an Audit & Supervisory Committee and appointing a CFO and CTO. We will also pursue operational reform and enhance management decision-making through digital transformation (DX) and the use of AI, thereby reinforcing the competitiveness of the entire Group. Moreover, we will create both environmental and economic value by addressing social issues while achieving sustainable growth, with the aspiration of playing an indispensable role in supporting people's daily lives, driving sustainable development, and ensuring safe, comfortable lives for all.

Driving Evolution of Our Sustainability Initiatives

Addressing the environmental challenges identified as key priorities under our Eighth Medium-term Business Plan, including climate change, the transition to a circular economy, biodiversity conservation, and nature-positive initiatives, goes beyond simply responding to public expectations. This work is the very foundation of our future business and a key management strategy for sustainable growth and enhancing corporate value.

We recognize carbon neutrality as an irreversible long-term trend, although there are signs of a slowdown in the near term, particularly in Europe and the United States. Regardless of short-term fluctuations, we will pursue the development of ultra-innovative technologies from a long-term perspective. We are making steady progress in developing multiple technologies, such as innovative electric arc furnaces, hydrogen-based direct reduction ironmaking, and carbon-recycling blast furnaces, while also working to establish a mass-supply system for high-quality, high-function GX steel. In particular, the installation of an innovative electric arc furnace in the Kurashiki district is more than a process conversion; it is a crucial initiative for simultaneously strengthening our competitiveness and improving profitability in a carbon-neutral era.

At the same time, achieving carbon neutrality requires technical feasibility as well as economic viability and broad societal acceptance. The widespread adoption of GX steel depends on developing a mechanism that ensures its environmental value is appropriately recognized by society, in addition to opening new markets and establishing systems. The JFE Group is actively working with the government to develop institutions and formulate international rules for making the value of carbon neutrality more transparent. Creating an environment in which the market value of GX steel is fairly recognized is also crucial for securing our competitive advantage. We view the transition to carbon neutrality as a growth opportunity for creating new demand, not simply as a cost, and intend to turn environmental value into economic value. Furthermore, we will closely monitor the progress of market development to make timely and appropriate investment decisions for the commercial implementation of decarbonization technologies.

We are also leveraging the Group's strengths to advance initiatives for transitioning to a circular economy as one means of addressing resource and energy constraints. Our steel business is promoting resource recycling by increasing the use of scrap and developing high-value-added products, while our engineering business is expanding operations in the waste-to-resource and recycling fields. In addition to our traditional engineering, procurement, and construction (EPC) business, we are enhancing our revenue model by combining it with high-value-added services such as operation and maintenance (O&M) utilizing DX. Businesses that support society's transition to a circular economy, such as waste-to-energy power generation, plastic recycling, and food recycling, enable us to simultaneously address environmental challenges and seize growth opportunities. Alongside developing our own technologies, we will collaborate with local governments and other companies to establish collection networks and recycling supply chains to broaden the distribution of recycled resources and eco-friendly products as we transition to a circular economy.

Our biodiversity conservation and nature-positive initiatives begin with recognizing that the JFE Group's business activities simultaneously depend on and affect natural capital. By identifying nature-related risks and opportunities, we will strive to mitigate any business-associated impacts and develop processes, products, and technologies that contribute to biodiversity conservation and nature-positive initiatives. In collaboration with a range of stakeholders, including local communities and our supply chain, we will promote effective initiatives with due consideration for their linkages to carbon neutrality and the circular economy. Biodiversity must be viewed in relation to carbon neutrality and the circular economy, rather than as an isolated environmental issue. We will pursue integrated initiatives and disclose information based on an understanding of the

interconnections, as well as the synergies and trade-offs, among these environmental issues.

Furthermore, we have been contributing solutions to environmental issues as a key aspect of the Group's major business transformation projects, such as the utilization of our land in the Keihin district. In utilizing land in the Keihin Waterfront Area, we are exploring and developing business opportunities that support the transition to carbon neutrality and a circular economy, such as power generation, data centers, and a used plastic recycling plant. These initiatives go beyond simply utilizing our assets; they create new value based on a vision for the future of local communities and industrial infrastructure. We view the resolution of environmental issues as an opportunity for growth, and by integrating the Group's technology, talent, and business foundation, we hope to simultaneously address social issues and enhance corporate value.

The JFE Group also regards contributing to the realization of a society in which the human rights of each and every individual are respected and protected as not only a corporate social responsibility but also a foundational principle of management. As part of our efforts to respect human rights and strengthen supply chain-wide risk management, we will conduct human rights due diligence across our Group companies and supply chain to identify human rights risks and promote responsible procurement.

Dialogue with stakeholders is essential for ensuring that our sustainability initiatives enhance corporate value. We will sincerely address the expectations, requests, and concerns expressed by society to clarify the appropriate role of the JFE Group and strengthen the effectiveness of our initiatives. No single company can effectively address climate change, the transition to a circular economy, and biodiversity conservation and nature-positive initiatives on its own. We will collaborate with customers, government authorities, local governments, financial institutions, investors, local communities, and members of our supply chain to contribute to the realization of a sustainable society.

Human Capital Initiatives

The power of the JFE Group's people is essential for achieving its goals of sustainable growth and value creation. The challenges facing the Group are increasingly complex, extending beyond environmental issues such as climate change, the transition to a circular economy, and biodiversity conservation and nature-positive initiatives to include the expansion of overseas operations and the utilization of DX and AI. These challenges cannot be addressed through a single area of expertise. I believe our future competitiveness will come from enabling employees with diverse experiences and values to apply their respective talents and generate fresh ideas.

To this end, we are steadfastly focusing on human resource development, strengthening employee engagement, investing in health and safety, and promoting diversity, equity, and inclusion (DEI). Safety takes precedence above all else, and it is management's responsibility to create workplace environments where every employee can confidently perform to the best of their ability. We are also prioritizing the development of international talent to expand our overseas operations, highly skilled DX personnel capable of improving productivity, and transforming business processes, and individuals with "captaincy," the ability to lead change by uniting diverse talent, in addition to their specialized expertise.

Moreover, we are reinforcing dialogue between management and employees as well as programs that support personal career development. By establishing an environment in which every employee can experience personal growth and proudly take on challenges with a sense of fulfillment, we will generate a virtuous cycle that connects the growth of each employee with that of the Company as a whole, leading to the sustainable enhancement of corporate value.

To Our Stakeholders

The JFE Group has grown on the foundation of society's trust. We will continue to address key issues such as climate change, the transition to a circular economy, biodiversity conservation and nature-positive initiatives, human rights, safety, and DEI through a concerted Group effort.

Sustainability Report 2026 presents a comprehensive overview of the JFE Group's initiatives for achieving sustainable growth and enhancing corporate value. We hope it will deepen understanding of the JFE Group.

We will continue to pursue sustainable growth while addressing social challenges as a corporate group that earns the trust of all our stakeholders, including shareholders, and plays an indispensable role for society.

Value of Steel

Appealing Qualities of Steel that Create Safe, Comfortable Lives for a Prosperous Global Future

Iron makes up approximately 30% of the Earth's mass and as much as 86% of its metal resources (200 billion tonnes). Because of its rich reserves, steel can be mass produced at very low cost. Compared to other materials, the environmental impact of its production is extremely low, and it has excellent recyclability. Steel can also be recycled repeatedly and reborn as various products (closed-loop recycling) with little to no environmental impact, contributing to the sustainable growth of our society.

Life Cycle Assessment of Steel

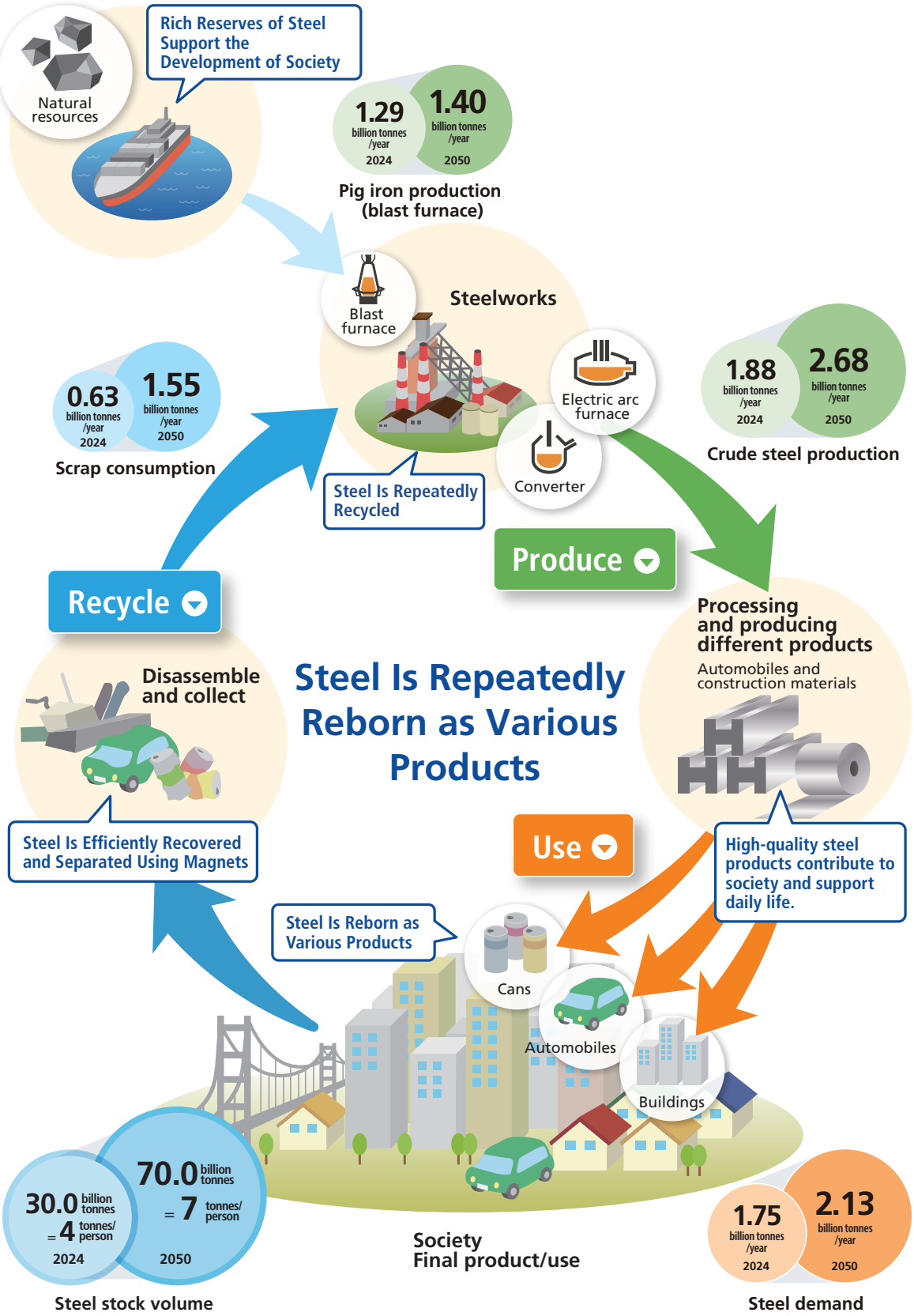
Steel's excellent recyclability contributes to the creation of a sophisticated value chain (P. 28) encompassing three components: produce, use, and recycle. Steel products can be repeatedly reborn as various products. The recycling rate for steel products has reached 93.7%. To properly assess the environmental value of steel, it is important to evaluate its entire life cycle, extending beyond production to use and recycling. In addition, global steel demand is expected to increase from 1.75 billion tonnes in 2024 to 2.13 billion tonnes in 2050. Over the same period, crude steel production is projected to rise from 1.88 billion tonnes to 2.68 billion tonnes per year, while steel scrap use is expected to rise from 0.63 billion tonnes to 1.55 billion tonnes per year. Against this backdrop, steel stock in society is projected to increase from 30 billion tonnes (4 tonnes per person) to 70 billion tonnes (7 tonnes per person), with further advances in resource circulation expected.

To properly assess this environmental value of steel, JFE Steel participated as a key member in an initiative led by the Japan Iron and Steel Federation (JISF) to quantify the environmental impact of the entire life cycle of steel products and developed the ISO/JIS standard* calculation methodology. Corresponding to this standard, materials with higher recyclability are found to have lower environmental impact such as on global warming.

Fourteen blast furnace and electric arc furnace steel manufacturers operating in Japan, including JFE Steel, have compiled and published the national average value for life cycle inventory (LCI) data for different types of steel products for FY2022.

*ISO 20915: Life cycle inventory calculation methodology for steel products (November 2018)
JIS Q 20915: Life cycle inventory calculation methodology for steel products (June 2019)

› **Efforts to Assess the Environmental Impact of the Excellent Recyclability of Steel Products** (P. 106)



Adapted from the Japan Iron and Steel Federation's long-term vision for climate change mitigation.

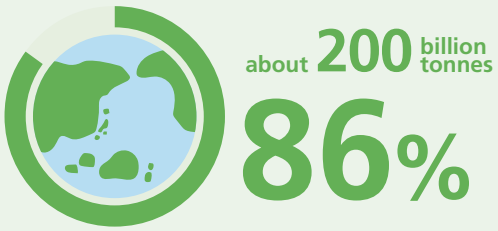
Produce High Economic Efficiency and Low Environmental Impact

The stable mass production of steel serves as the foundation for daily life and society. CO_2 generated by the manufacturing process of steel is extremely low compared to other materials, making it an environmentally sound material. Steel is essential for society's sustainable development and to create safe, comfortable lives for people everywhere.

Earth, a Planet of Iron (Abundant Resources)

As much as 86% of the Earth's metal resources are iron ore (200 billion tonnes).

Recoverable Reserves of Iron Ore on the Earth

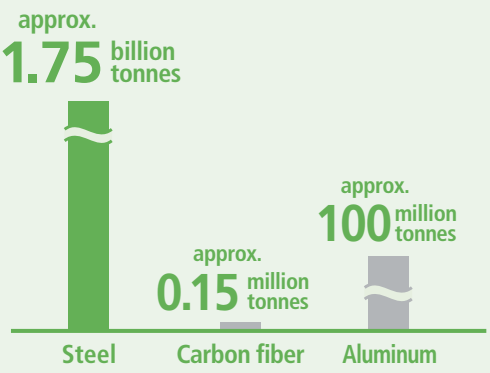


Source: Mineral Commodity Summaries (2026)

Mass Production at Low Cost

With rich reserves and a long history of technological development, iron is mass produced at reasonable prices and supplied stably, thereby contributing to the sustainable growth of society.

Global Demand (2024)



Research: JFE Holdings

Price*



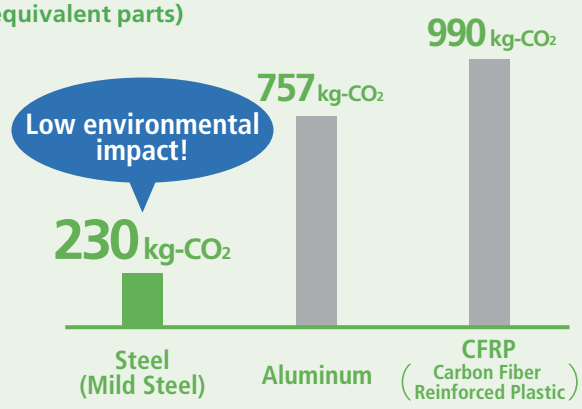
Research: JFE Holdings

*Cost of producing one unit weight of iron is indexed at 1 for comparison with other materials.

Extremely Low Environmental Impact at the Manufacturing Stage when Compared to Other Materials

Greenhouse gas (GHG) emissions from steel manufacturing are approximately one-fourth to one-fifth those from aluminum and carbon fiber for equivalent functionality*.

GHG Emissions at the Manufacturing Stage of Materials (CO_2 equivalent) ($kg\text{-}CO_2$/100 kg of steel-equivalent parts)



	Steel (Mild Steel)	Aluminum	CFRP (Carbon Fiber Reinforced Plastic)
GHG emissions per unit weight (CO_2 equivalent) ($kg\text{-}CO_2$/kg)	2.3	11.3	22.0
Functional equivalent weight (kg)	100	67	45

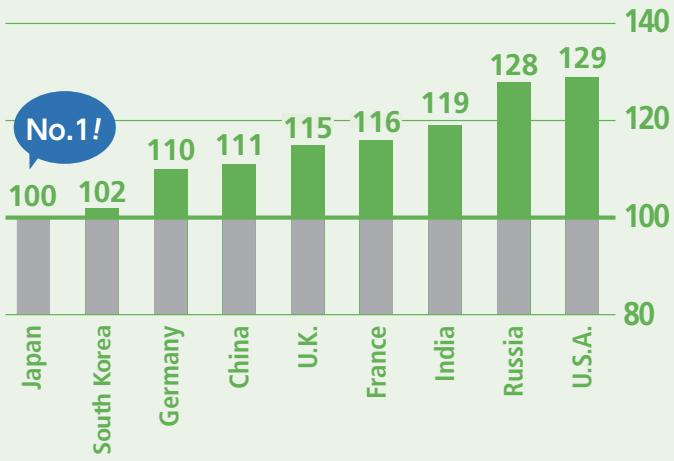
Source: Compiled from data disclosed by WorldAutoSteel and the Japan Iron and Steel Federation

*Ability to meet the same operational and performance requirements

Japan's Steel Industry Boasts the Highest Energy Efficiency in the World

Japan's steel industry (converter steel) produces steel with the lowest environmental impact compared to other major countries. This is a result of its longstanding efforts toward environmental conservation, including developing and spreading the use of energy-saving technologies.

Energy Efficiency by Country, with Japan at 100 (2019)



Source: Research Institute of Innovative Technology for the Earth (RITE)

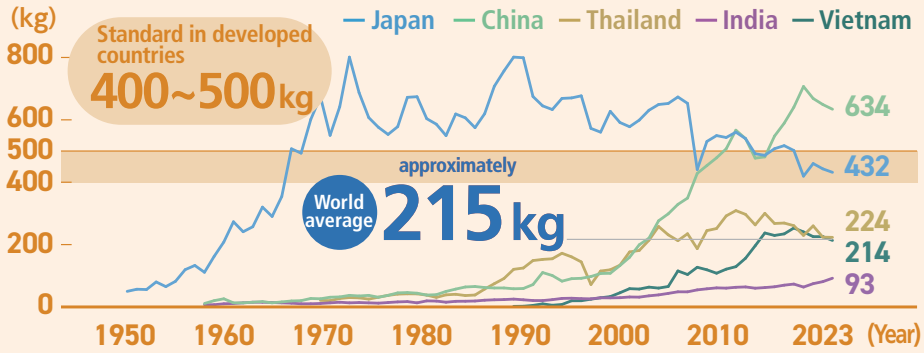
Use Foundation of Daily Life and Society

The use of steel supports daily life while helping to reduce our impact on the environment. For example, making automobile frames with high-tensile-strength steel sheets, which have a reduced thickness but retain their strength, considerably decreases vehicle weight while maintaining crash performance, thereby helping to reduce GHG emissions for society as a whole.

Potential to Grow on a Global Scale

Global average of annual consumption of steel is approximately 215 kg per capita. The long-term global demand for steel is expected to keep growing alongside the economic development of emerging countries.

Trends in Annual Steel Consumption per Capita by Country (kg/person/year)

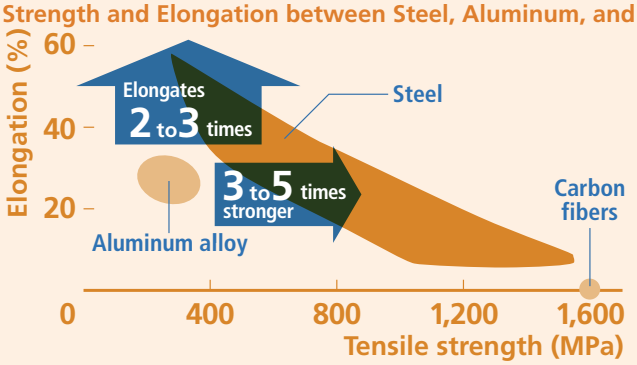


Source: World Steel Association

Potential for Evolution

Steel can be elongated two to three times more than aluminum at the same rigidity and is three to five times stronger at the same extended rate, making it the optimal material for new world-class structures such as TOKYO SKYTREE. And yet there is still potential for further evolution. The emerging needs of society will advance the development of steel and contribute to a productive future.

Comparison of Strength and Elongation between Steel, Aluminum, and Carbon Fiber



Research: JFE Holdings

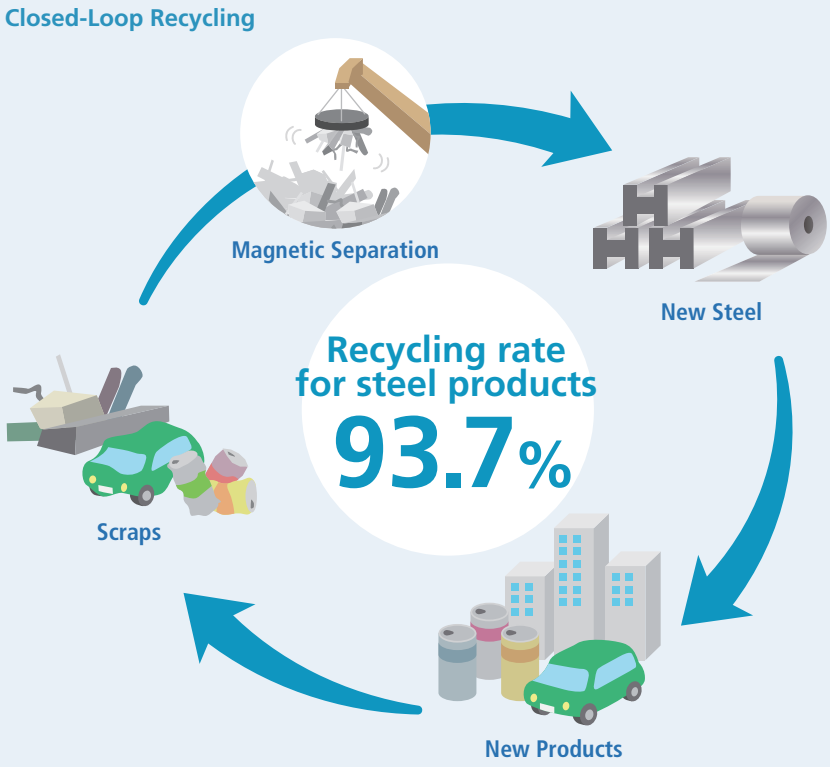
Recycle Helping Society Transition to a Circular Economy

Steel is a highly recyclable material that can be easily separated and collected using its magnetic properties. It can be efficiently separated, collected, and recycled into high-quality, high-functioning products over and over again through closed-loop recycling.

Closed-Loop Recycling of Steel

Steel can be recycled a number of times as a raw material for steel products while retaining its original properties. Closed-loop recycling is superior to open-loop recycling* in terms of sustainability because closed-loop recycling reduces the consumption of natural resources, as well as the amount of environmentally hazardous substances and waste.

*In open-loop recycling, the material recycling process involves two types of finite recycling: thermal recycling and cascade recycling. Thermal recycling means that heat generated by incineration is recovered, while cascade recycling indicates recycling the material accompanied by the degradation or alteration of the material's properties.



Source: The Japan Iron and Steel Federation

Sustainability Management

Basic Policy

Based on its corporate philosophy of "contributing to society with the world's most innovative technology," the JFE Group will continue to be a company that provides products and services for a prosperous global future for a long time to come. We also consider it our mission to become an organization that is highly regarded by society by striving to play an indispensable role in supporting people's daily lives, driving sustainable development, and ensuring safe, comfortable lives for all. In addition to our initiatives on environmental sustainability, we will also focus strongly on promoting our human resources strategy and human capital management to achieve sustainable growth and enhance corporate value.

JFE Vision 2035—JFE Group's Aspirations for 2035

Given our goal of achieving carbon neutrality by 2050, 2035 will be a very important year. By this time we should have completed developing and started implementing our carbon-neutral technologies in a full-scale transformation of our business processes. We have determined the following aspirations for 2035 in response to stakeholder concerns over the steel industry's ability to meet the technological and financial challenges to achieving carbon neutrality and whether JFE will be capable of sustainable growth in the face of intensifying competition across all fronts.

Become the Leader in Carbon Neutrality (CN) Technology Development	Expand Consolidated Business Profit (Segment profit: ¥700 billion)
• Complete development of ultra-innovative process conversion technology • Provide strong technological capabilities and a diverse eco-product lineup to help conserve the global environment • Become the main player in the high-quality GX steel market	• Streamlined yet resilient domestic structure based on growth strategies – Create technologies and nurture talent that drive our competitive advantage – Deepen our shift from quantity to quality and reorganize and integrate each business • Growth through the expansion of business in overseas growth regions "from the inside" – Collaborate with top-tier partners and pursue M&A

JFE Group Sustainability System

From the perspective of preventing damage to the JFE Group's corporate value and enhancing it, the Group established the JFE Group Sustainability Council to oversee and direct the sustainability initiatives of the entire organization, including risk management. Chaired by the president of JFE Holdings, the council comprises Inside Directors, executive officers, and others, with the management of operating companies attending as needed. Committees have been established under the council, including the JFE Group Compliance Committee, JFE Group Environmental Committee, JFE Group Internal Control Committee, JFE Group Information Security Committee, Public Disclosure Committee, and Corporate Value Enhancement Committee. Overseeing and directing the Group's sustainability initiatives, these committees deliberate on Group policies, monitor how they are being instilled across the Group, and share information on the tasks at hand as well as on issues that have materialized and relevant responses.

Among the items included in the agenda discussed by the JFE Group Sustainability Council, the Group's basic policies, action plans, content of key initiatives, and response to critical circumstances are reported regularly to the Board of Directors, which deliberates on the issues and provides the council with direction and supervision. In FY2025, the council reported at four of the meetings of the Board of Directors, and the Board provided supervision on sustainability policies, ongoing responses to the tasks at hand, and progress underway for achieving KPIs, while also deliberating on future tasks.

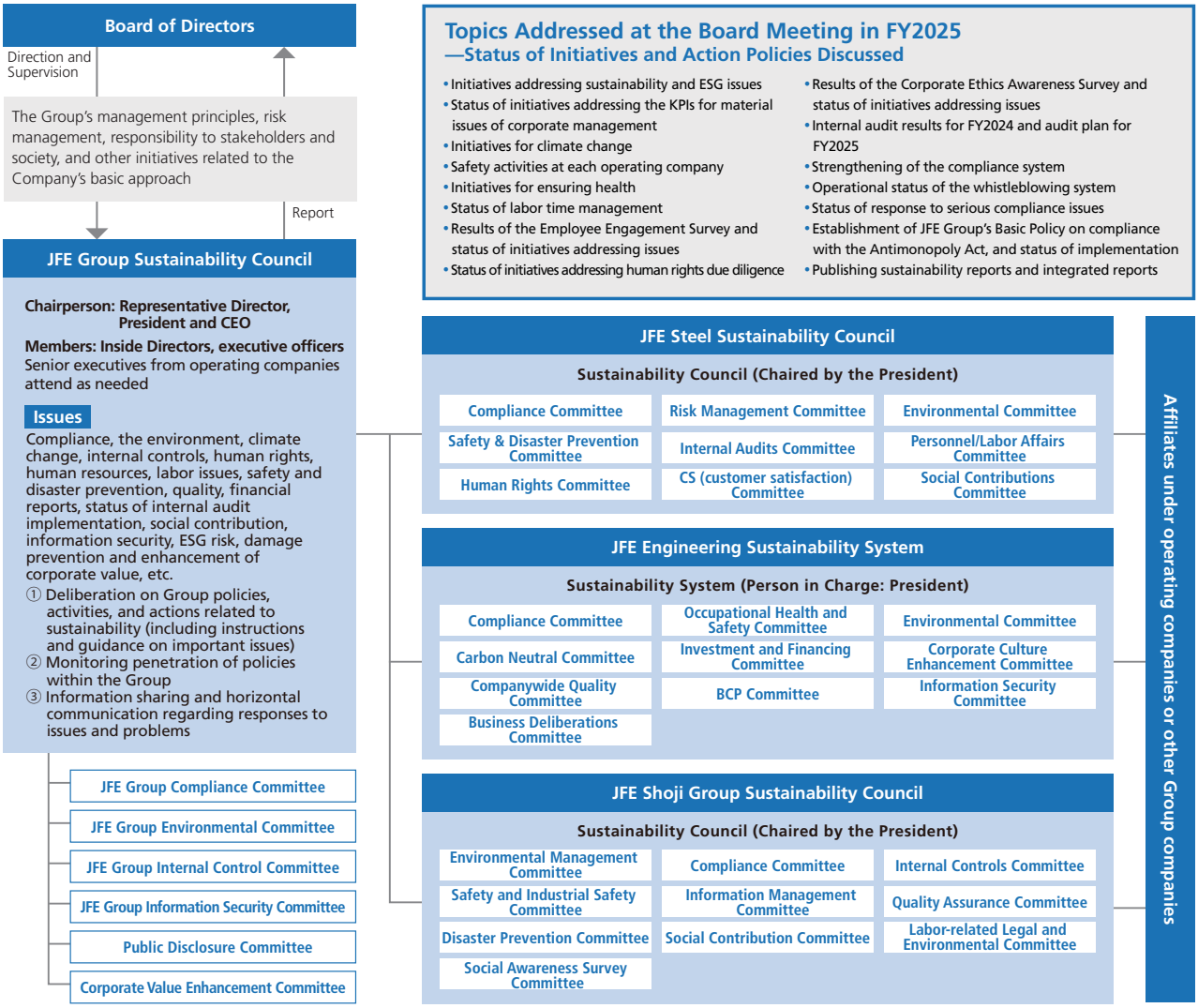
Activities of the Group Sustainability Council

The Group Sustainability Council meets approximately once every three months to discuss wide-ranging topics, including compliance with the Antimonopoly Act and laws and regulations for preventing corruption such as bribery involving public servants and other officials, the environment, climate change, internal controls, human rights, human resources, labor issues, safety, disaster prevention, quality, financial reports, status of audits, social contribution, ESG risks related to information security, and preventing damage to and enhancing corporate value. The council deliberates on policies related to Group initiatives, which also include providing instruction and guidance on material issues, monitors the penetration of the policies, and shares information on and carries out horizontal communication regarding our responses to various issues.

Cooperation with Operating Companies

The Operating Companies have also set up respective entities with subcommittees on compliance and the environment that operate in collaboration with the JFE Group Sustainability Council to promote Groupwide initiatives from the perspective of preventing damage to the JFE Group's corporate value and enhancing that value.

Diagram of System for Promoting Sustainability



Risk Management and Supervision Related to Corporate Ethics

The JFE Group conducts a Corporate Ethics Awareness Survey on a regular basis (twice a year starting in FY2024) for directors and employees of JFE Holdings and its operating companies to confirm the penetration and thorough compliance of the Group's Corporate Vision, Corporate Values, and Standards of Business Conduct, along with the identification of potential risks. The survey conducted in FY2024 confirmed that most employees had a good understanding of the Group's Corporate Vision and standards of business conduct, as well as the laws, regulations, and rules related to their work, and that the JFE Group's Basic Policy on Preventing Bribery of Public Officials and the Guidelines for entertainment and gifts were being adhered to at workplaces. However, while we confirmed that employees are carrying out their work with a high awareness of compliance, the survey also brought to our attention issues to address going forward. The results of the Corporate Ethics Awareness Survey and relevant policies were reported at the JFE Group Sustainability Council and Board of Directors meeting in FY2025, and each Group company has implemented specific initiatives for improvement under the supervision of the JFE Group Sustainability Council and Board of Directors. We will conduct a similar survey in FY2026 to review the status of improvement on outstanding issues and changes in employee awareness to incorporate them into future initiatives.

During the formulation of the Eighth Medium-term Business Plan, announced in May 2025, JFE Holdings' Board of Directors confirmed that the Group's Corporate Vision and Standards of Business Conduct remain the unchanging philosophy and unifying force of the JFE Group since its founding.

Risk Management

JFE Holdings is responsible for comprehensive risk management in accordance with its Basic Policy to Establish the Internal Control Systems. The JFE Group Sustainability Council, chaired by the president of JFE Holdings, consolidates information and strengthens management across the Group to reduce the frequency and impact of risks.

The executive officer responsible for risk strives to identify potential ESG risks such as those associated with climate change. As necessary, the council confirms and evaluates risks and discusses and determines countermeasures. Key managerial issues are deliberated by the Group Management Strategy Committee.

The Board of Directors supervises initiatives on ESG risks such as those related to climate change and CSR by discussing, making decisions on, and receiving reports about these matters.

Monitoring Method for ESG Risks

Issues that may affect management are monitored by the JFE Group Sustainability Council, Group Management Strategy Committee, and Management Committee. The JFE Group Environmental Committee consolidates information and strengthens management to reduce the frequency and impact of risks and to maximize opportunities.

Group Sustainability Strategy

Formulating the Eighth Medium-term Business Plan and Revising the Material Issues of Corporate Management

The Eighth Medium-term Business Plan (FY2025–FY2027) covering the next three years was formulated by backcasting from our JFE Vision 2035, which targets the year 2035.

The business environment remained challenging in FY2025 as steel demand and market conditions fell short of expectations due to factors including the slowdown in the Chinese economy, the rise of protectionism such as U.S. tariffs, and heightened geopolitical risks caused by tensions in the Middle East. As a result, business profit remained slightly below the level assumed in the Plan. We nevertheless remain committed to the JFE Vision 2035 and Eighth Medium-term Business Plan and are working to steadily advance our growth strategy. Achieving progress toward the JFE Group's aspirations under this challenging environment will require greater than ever resolve to implement our growth strategy centered on realizing a resilient, streamlined domestic production structure based on a product portfolio that leverages the JFE Group's strengths, and a business expansion strategy that includes aggressive investment in overseas growth fields and regions.

We will continue to position climate change as a top-priority business issue and follow the JFE Group Environmental Vision for 2050 to address the issue. Under the Vision, we promote activities for reducing GHG emissions at JFE Steel and throughout society, while also developing technologies to address these challenges as opportunities for growth. JFE will continue to systematically ensure a stable supply of steel, the core of JFE's business, to society as an indispensable material for social development and daily life.

Refer to the following on details of the Eighth Medium-term Business Plan.

› **JFE Group Long-term Vision "JFE Vision 2035" and Eighth Medium-term Business Plan**
(https://www.jfe-holdings.co.jp/en/sustainability/sus_manage/manage/plan/)

Material Issues of Corporate Management

JFE Group's Materiality under the Eighth Medium-term Business Plan

The JFE Group's actions related to management issues are based on identifying materiality and setting KPIs to minimize negative societal impact and maximize societal value by investing JFE Group's resources from the standpoint of meeting stakeholder needs.

Under the Eighth Medium-term Business Plan, we identified issues requiring special attention over the next three years for realizing the JFE Vision 2035, while also taking into consideration the issues we have been addressing to date. The issues were extracted from the perspectives of developing a business foundation for sustainable growth and pursuing a growth strategy for achieving the Vision. Following a materiality assessment, we identified our material issues of corporate management (16 issues in 6 focus areas).

Areas of Focus	Material Issues
Address climate change issues	(1) Reduce the JFE Group's GHG emissions and contribute to reducing GHG emissions across society
Contribute to the transition to a circular economy	(2) Promote initiatives for realizing a circular economy
Acquire robust profitability	(3) Steel Business: Improve sales and manufacturing capabilities, expand and advance business areas
	(4) Engineering Business: Improve profitability and competitiveness, promote investment in growth areas
	(5) Trading Business: Revitalize the management foundation, advance insider status in overseas growth markets
Ensure occupational safety and health for employees	(6) Promote talent acquisition and development
	(7) Promote diversity, equity, and inclusion (DEI)
	(8) Improve work engagement
Promote human capital management	(9) Prevent workplace accidents
	(10) Promote health and productivity management
Minimize risks to the business foundation	(11) Respect the human rights of each person involved in our business
	(12) Ensure adherence to corporate ethical standards and compliance
	(13) Provide appropriate quality assurance
	(14) Improve the level of information security
	(15) Coexist with local communities, society, and nature
	(16) Maintain a sound financial position

Process for Identifying Material Issues of Corporate Management

During past updates to our medium-term business plans, we have reevaluated our material issues of corporate management. This time, as we formulated the Eighth Medium-term Business Plan, we also determined our key material issues through the following process.

STEP 1 Reevaluate material issues of corporate management under the Seventh Medium-term Business Plan

We reevaluated our material issues of corporate management under the plan, along with the implementation and results of KPIs set for each materiality.

For more on material issues of corporate management identified in FY2021, please refer to:

› **Process for Identifying Material Issues of Corporate Management (P. 16 of the JFE Group CSR Report 2021)**
(https://www.jfe-holdings.co.jp/en/common/pdf/sustainability/data/2021/csr2021e.pdf#page=19)

STEP 2 Extract candidates for material issues

We created a long-term vision with an eye to 2035 and selected 28 potential material issues from the perspectives of realizing a business foundation for sustainable growth as well as growth strategies to achieve our vision.

- Prevent workplace accidents
- Preserve environmental air and water quality
- Promote health and productivity management
- Reduce disaster risks at production sites
- Respect the human rights of each person involved in our business
- Address aging social infrastructure
- Ensure adherence to corporate ethical standards and compliance
- Ensure employee safety during emergencies
- Provide appropriate quality assurance
- Address economic security risks
- Raise level of information security
- Implement measures for natural and other disasters
- Coexist with local communities, society and nature
- Appropriately disclose information
- Maintain sound financial structure
- Return profits to stakeholders
- Reduce the JFE Group's GHG emissions and contribute to reducing GHG emissions across society
- Widely provide products and services to society by expanding and advancing business areas
- Improve work engagement
- Sustainable manufacturing based on improvement in sales and manufacturing capabilities
- Promote diversity, equity and inclusion (DEI)
- Realize the scope of profits to ensure sustainable growth
- Promote talent acquisition and development
- Expand business through ongoing investment in operating businesses
- Promote initiatives for realizing a circular economy
- Improve operational efficiency and productivity through digital technology

STEP 3 Narrow down material issues

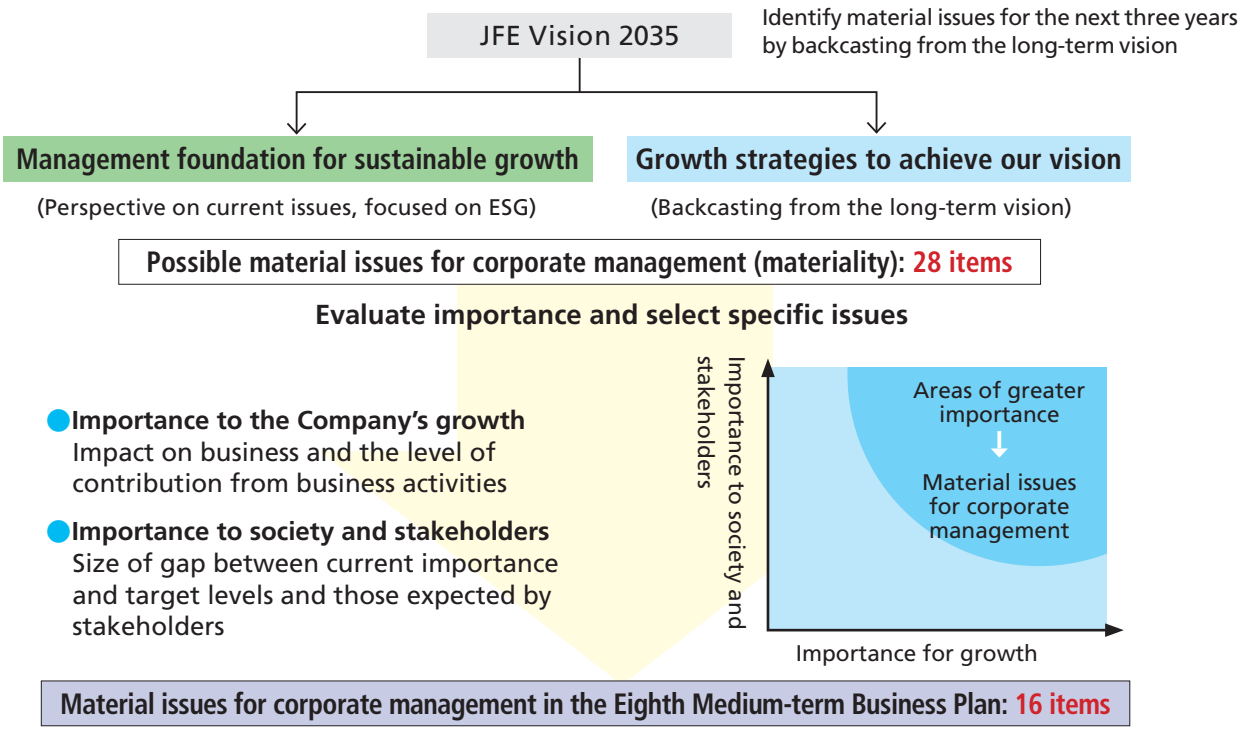
We assessed the importance of the identified issues to the Company's growth as well as to society and stakeholders, and identified 16 material issues for corporate management to be incorporated into the Eighth Medium-term Business Plan.

- Prevent workplace accidents
- Promote health and productivity management
- Respect the human rights of each person involved in our business
- Ensure adherence to corporate ethical standards and compliance
- Provide appropriate quality assurance
- Improve the level of information security
- Coexist with local communities, society, and nature
- Maintain a sound financial structure
- Reduce the JFE Group's GHG emissions and contribute to reducing GHG emissions across society
- Improve work engagement
- Promote diversity, equity and inclusion (DEI)
- Promote talent acquisition and development
- Promote initiatives for realizing a circular economy
- Steel Business: Improve sales and manufacturing capabilities, expand and advance business areas
- Engineering Business: Improve profitability and competitiveness, promote investment in growth areas
- Trading Business: Revitalize the management foundation, advance insider status in overseas growth markets

STEP 4 Determine aspirations and targets

We have established the aspirations and targets for the identified material issues for corporate management, as well as set KPIs to indicate management of activities for achieving such goals. In addition to reevaluating the material issues for corporate management during the formulation of the medium-term business plan, we are also conducting an annual assessment that includes a review of the status, performance, and importance of the KPIs.

Material Issues for Corporate Management: Review Process



Initiatives for Addressing Material Issues of Corporate Management

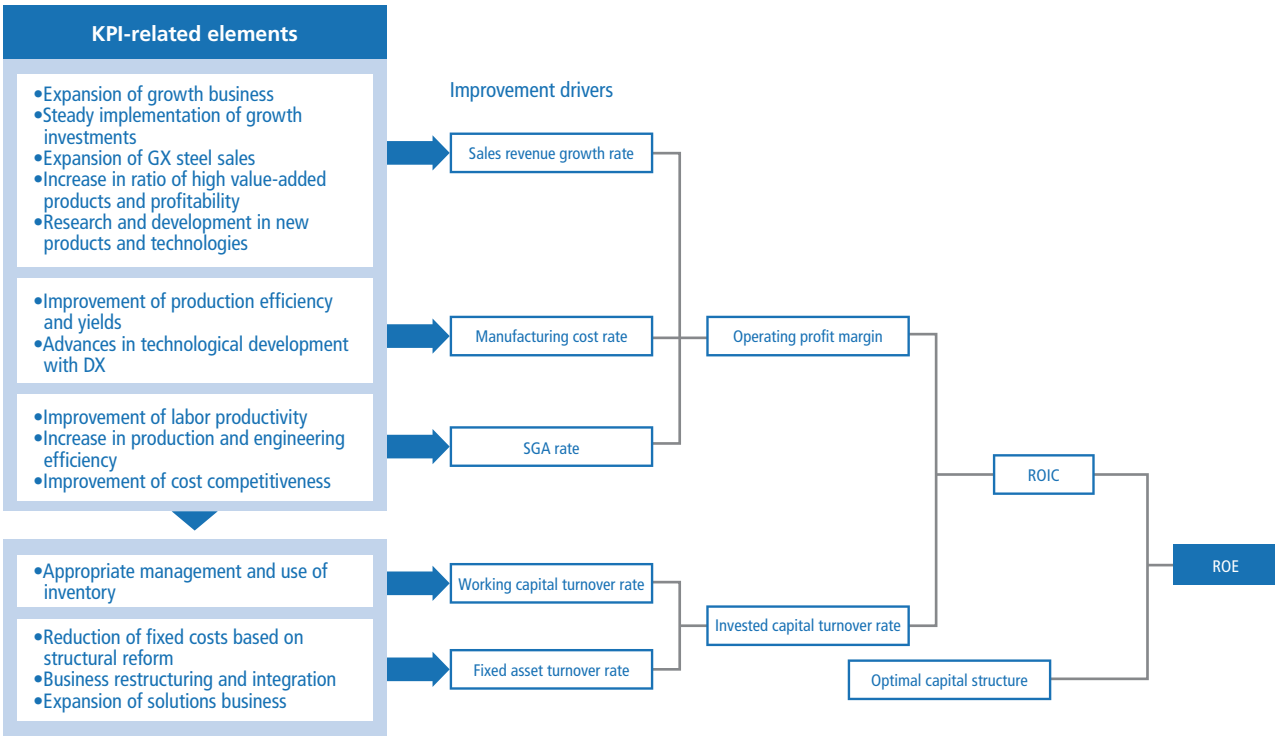
Performance Evaluation for FY2025 KPIs and Establishment of FY2026 KPIs

We assessed the performance of KPIs for FY2025 corresponding to material issues of corporate management under the Eighth Medium-term Business Plan, identified through the above-mentioned process. We also established KPIs for FY2026 based on the assessment results and third-party opinion. FY2025 performance and KPIs for FY2026 were finalized following discussions by the Management Committee and other organs of each operating company and deliberation by the Group Management Strategy Committee and Board of Directors. Achieving the KPIs will fulfill our corporate social responsibility while also reducing risks that threaten the foundation of management, acquiring robust profitability, and attaining our financial targets.

› FY2025 KPI Results and FY2026 KPIs (P. 19)

Initiatives for Improving Financial Indicators

Achieving the financial targets will depend on enhancing performance as measured by financial indicators that serve as drivers for improvement. intentionally linking each initiative to the financial targets will increase effectiveness and lead to raising medium- to long-term corporate value.



Improving the Sales Revenue Growth Rate

We will seek to expand growth businesses including the "from the inside" model in overseas growth regions and those that contribute to advancing the circular economy. We will also promote activities for increasing sales revenue by designating KPIs that include increases in the ratio of high-value-added products and the number of new products and technologies developed in the steel business and improved project profitability in the engineering business.

Improving the Manufacturing Cost Rate

We will consistently work on enhancing production efficiency and yields to improve the manufacturing cost rate. To drive further improvement through DX, we will designate the number of advanced DX personnel trained as a KPI to bolster our human resources.

Improving the SGA Rate

To enhance labor productivity, we will advance operational efficiency and automation through measures such as core system upgrades in each business. In the steel business in particular, we will manage the initiatives by designating KPIs to measure the contribution to profits from rationalization and higher labor productivity due to core system upgrades, use of data science and automation as well as labor savings achieved in line with the decline in Japan's labor force and population.

Impact on the Working Capital Turnover Rate and Fixed Asset Turnover Rate

In addition to implementing the above-mentioned initiatives and undertaking appropriate management and use of inventory, we will seek to make improvements by constructing optimal domestic systems, restructuring and integrating businesses, and promoting the use of land owned in the Keihin district. We will also work to expand revenues from solutions services, primarily in the steel segment, drawing upon our accumulated knowledge and expertise as a KPI.

Initiatives and Relevant SDGs

The JFE Group engages in initiatives for achieving sustainable growth for the Group over the medium to long term and enhancing corporate value.

The following chart summarizes all activities introduced in this report. Through these activities, the JFE Group intends to contribute to the achievement of the SDGs.

Activities		Related SDGs
Addressing ESG Issues		
Initiatives to Address Climate Change (P.49)	• Reduction of GHG in the steel business • Contributing to reducing GHG emissions across society • Reducing energy usage • Scenario analysis based on TCFD recommendations	
Initiatives to Transition to a Circular Economy (P. 126)	• Commitments to external initiatives • Conversion of byproducts and waste into resources • Development of resource-efficient eco-products and eco-solution technologies • Expanded use and sales of recycled materials	
Biodiversity Conservation and Nature Positive (P. 154)	• Commitments to external initiatives • Assessment of relationship between engagement, business activities, and natural capital (based on the LEAP approach)	
Environmental Management Activities (P. 180)	• Promotion of environmental management system • Environmental education • Reducing environmental impact	
Human Capital: Promoting Talent Acquisition and Development (P. 188)	• Human resource development	

Activities Related to SDGs		Related SDGs
Promoting Diversity, Equity, and Inclusion (DEI) (P. 190)	• Promoting women's professional development • Promoting childcare leave taken by men • Employment of people with disabilities • Programs for employees over 60 years old • Creating an inclusive workplace • Securing diverse human resources	
Human Capital: Improving Work Engagement (P. 195)	• Making working conditions more pleasant and increasing work engagement • Operational reforms • Invigorating workplaces through small group activities	
Human Capital: Occupational Health and Safety (P. 202)	• Occupational health and safety • Employee health	
Human Rights (P. 212)	• Respecting human rights initiatives • Conducting human rights due diligence	
Providing Quality Products and Enhancing Customer Satisfaction (P. 226)	• Quality initiatives • Improving customer satisfaction • Ensuring stable supply	
Supply Chain Management (P. 233)	• Promoting green procurement • Procurement policy and initiatives for each business	
Community (P. 235)	• Local activities • Support for external organizations • Support for youth development • JFE 21st Century Foundation	
Compliance (P. 263)	• Adherence to ethical standards, legal compliance	

FY2025 KPI Results

Evaluation criteria

Target attributes		○	△	×
Quantitative	Set for each fiscal year	Accomplished 100% or better.	Accomplished 80%–99%.	Accomplished 79% or less.
	Set medium- to long-terms (in case of setting a multi-year target)	Final target accomplished 100% or better.	Final target partly accomplished with some results (80% or better with linear interpolation).	Working toward the goal but no results yet (79% or less with linear interpolation).
Qualitative		Fully accomplished with significant results.	Partly accomplished with some results.	Working toward the goal but no results yet.

*In Groupwide evaluations, the lowest result among the companies is taken as the overall result.

Areas of Focus	Material Issues	FY2025 KPIs	Initiatives and Results for FY2025	Assessment
Address climate change issues	**Reduce the JFE Group's GHG emissions and contribute to reducing GHG emissions across society**	Steel business 1. Approval rate for GX investment designed to reduce GHG emissions by 30% or more by FY2030: 95%	1. Approval rate for GX investment designed to reduce GHG emissions by 30% or more by FY2030: 90%	×
		2. GX steel sales: 100,000 tonnes per year	2. GX steel sales: FY2025 KPI achieved (over 100,000 tonnes)	○
		Engineering business Promote use of own renewable energy; non-fossil fuel electricity use: 90% or more	Promote use of own renewable energy; Non-fossil fuel electricity use: 90%	○
		Engineering business Contribute to reducing CO_2 emissions in society by providing renewable energy power generation facilities and expanding the power supply business: 12.5 million tonnes per year	Contribution to CO_2 emissions reduction: 12.91 million tonnes per year	○
		Trading business FY2025 domestic CO_2 emissions: reduce 22.5% (compared to FY2019)	Reduced domestic CO_2 emissions by 36.6% (compared to FY2019)	○
Contribute to the realization of a recycling-oriented society	**Promote initiatives for realizing a circular economy**	Steel business 1. Expand collection and use of collected "return scrap": 2.0 times (compared to average volume under the Seventh Mediumterm Business Plan)	1. Expand collection and use of collected "return scrap": 2.0 times or more (compared to average volume under the Seventh Mediumterm Business Plan)	○
		2. Recycle co-products generated in the Company (recycling rate of slag, dust, sludge, etc.): 99% or more	2. Recycle co-products generated in the Company (recycling rate of slag, dust, sludge, etc.): 99.6%	○
		3. Expand use of steel slag products for marine area use (cumulative total under the Eighth Medium-term Business Plan): 50,000 tonnes	3. Expand use of steel slag products for marine area use (cumulative total under the Eighth Medium-term Business Plan): 78,000 tonnes	○
		Engineering business Expand bases for recycling / new regional electricity / waste-to-energy power generation business, etc.: 3 sites or more	Expand bases for recycling/new regional electricity/waste-to-energy power generation business, etc.: 4 sites	○
		Trading business Expand product lineup to contribute to a circular economy • Increase products handled by at least three in addition to current products with over 3,000 tons in volume per year	Expand product lineup to contribute to a circular economy • Increased products handled by at least four in addition to current products with over 3,000 tons in volume per year	○
Acquire robust profitability	Steel business **Improve sales and manufacturing capabilities, expand and advance business areas**	1. Companywide OPY: +0.3% (compared to FY2024 results)	1. Companywide OPY: +0.3% (compared to FY2024 results)	○
		2. Develop new products and technologies: 20 per year	2. Develop new products and technologies: 23 per year	○
		3. Increase the percentage of total revenue from high-value-added products to 54%	3. Increase the percentage of total revenue from high-value-added products to 53%	△
		4. Improvements through streamlining (core systems, data science, automation) and labor productivity enhancement: Achieved FY2027 target of 25%	4. Improvements through streamlining (core systems, data science, automation) and labor productivity enhancement: Achieved FY2027 target of 28%	○
		5. Time saved by generative AI and low-code development: 3,000 hours per month	5. Time saved by generative AI and low-code development: 6,198 hours per month	○
		6. Labor-saving initiatives in response to declining labor force and population (Eighth Medium-term Business Plan): Reduced by more than 80 employees	6. Labor-saving initiatives in response to declining labor force and population (Eighth Medium-term Business Plan): Reduced by 163 employees	○
		1. Overseas steel business profit: ¥30 billion	1. Overseas steel business profit: ¥18.3 billion	×
		2. Domestic Group companies business profit: ¥80 billion	2. Domestic Group companies business profit: ¥90.6 billion	○
		3. Solutions business profit: ¥8 billion	3. Solutions business profit: ¥10.6 billion	○
		4. Increase in foreign patent applications: 109%	4. Increase in foreign patent applications: 107%	△

Areas of Focus	Material Issues	FY2025 KPIs	Initiatives and Results for FY2025	Assessment
Promote human capital management	Engineering business **Improve profitability and competitiveness, and promote investment in growth areas**	Improve project profitability Proportion of high-value-added and differentiated projects: Aim for over 50% by FY2027, and over 40% by FY2025	Improve project profitability Proportion of high-value-added and differentiated projects: Aim for over 50% by FY2027, and 45% by FY2025	○
		O&M business sales: over ¥290 billion	O&M business sales: over ¥333.5 billion	○
		Progress of operational reforms (to improve business efficiency by FY2035): Completed workflow analysis for specified departments in FY2025, aiming to complete optimization of all business processes in FY2027	Progress of operational reforms (to improve business efficiency by FY2035): Completed workflow analysis for specified departments in FY2025, aiming to complete optimization of all business processes in FY2027	○
		Accelerate the expansion of our sales channels by conducting a full revision of related measures and strengthening the framework for these efforts: Increase the number of new customers by 10% in FY2025 (compared to FY2024) and aim to achieve a 20% increase in FY2027	Accelerate the expansion of our sales channels by conducting a full revision of related measures and strengthening the framework for these efforts: Increase the number of new customers by 8% in FY2025 (compared to FY2024) and aim to achieve a 20% increase in FY2027	△
	Trading business **Revitalize the management foundation and advance insider status in overseas growth markets**	• Aim to complete core system overhaul by FY2027 • In FY2025, visualize current operations and complete workflow creation for over 75% of total	• Aim to complete core system overhaul by FY2027 • Completed visualization of current operations for all sales organizations 100%	○
		Implement growth investments to achieve profits: ¥85 billion over three years	FY2025 KPI target was not achieved	×
Ensure occupational safety and health for employees	**Promote talent acquisition and development**	Steel business 1. New international employees trained: +33 2. Advanced DX employees trained (cumulative): 800	Steel business 1. New international employees trained: +44 2. Advanced DX employees trained (cumulative): 831	○
		Engineering business 1. New international employees trained: +10 2. Advanced DX employees trained (cumulative): +30	Engineering business 1. New international employees trained: +7 2. Advanced DX employees trained (cumulative): +40	×
		Trading business New overseas secondments: +25	Trading business New overseas secondments: +23	△
	Promote diversity, equity and inclusion (DEI)	1. Women in managerial positions : Aim for at least 10% by April 2030 (including at least 20% in management and sales departments), with a target of achieving 5.7% by April 2026	1. Women in managerial positions : Aim for at least 10% by April 2030 (including at least 20% in management and sales departments), with a target of achieving 5.5% by April 2026	△
		2. Percentage of male employees taking childcare leave: 65% or more	2. Percentage of male employees taking childcare leave: 75.7%	○
	Improve work engagement	Engagement survey Affirmative response to questions about job satisfaction: Steel business 75% or more Engineering business 80% or more Trading business 80% or more	Engagement survey Affirmative response to questions about job satisfaction: Steel business 69% Engineering business 81% Trading business 79%	△
Minimize risks to the business foundation	**Prevent workplace accidents**	Serious injuries: 0 Lost-workday injuries: Steel business 0.10 or less Engineering business 0.25 or less Trading business 0.15 or less	Serious injuries: 0 Lost-workday injuries: Steel business 0.08 Engineering business 0.38 Trading business 0.75	×
	Promote health and productivity management	Proportion of employees who are physically and mentally healthy and working at an 80% or higher performance level (presenteeism below 20%): 67% or higher	Proportion of employees who are physically and mentally healthy and working at an 80% or higher performance level (presenteeism below 20%): Steel business 68.0% Engineering business 64.6% Trading business 72.2%	△
Minimize risks to the business foundation	**Respect the human rights of each person involved in our business**	1. 100% attendance from the target audience for human rights awareness training 2. Promote human rights due diligence Promote the following initiatives to realize respect for human rights throughout the supply chain: • Continue conducting human rights due diligence at both the Company and Group companies • Build a system for managing human rights risks of suppliers	1. Human rights awareness training participation rate among designated participants: 100% 2. Conduct human rights due diligence [Expansion of human rights due diligence to Group companies] Steel business Conducted assessments and provided feedback to three overseas Group companies (the Philippines, the United States, and Singapore). Engineering business Conducted assessments and provided feedback to three overseas Group companies (Indonesia, Malaysia, and Germany). Trading business Provided feedback on the FY2024 survey results to all 45 overseas Group companies. [Establishment of a human rights risk management system for suppliers] Steel business Conducted a second-round survey of 219 suppliers. Engineering business Conducted a second-round survey of 76 suppliers. In addition, started surveys for new suppliers at the commencement of transactions and for existing suppliers every three years. Trading business Provided feedback on the FY2024 survey results to 88 suppliers and conducted new surveys of 14 suppliers.	○
	Ensure adherence to corporate ethical standards and compliance	Compliance training participation rate: 100%	Participation rate in compliance training programs by employee level and legal topic: 100%	○

Areas of Focus	Material Issues	FY2025 KPIs	Initiatives and Results for FY2025	Assessment
Minimize risks to the business foundation	Promote appropriate quality assurance	1. Quality audit implementation at Group companies: 100% of planned number	1. Quality audit implementation at Group companies: 100% of planned number	○
		2. Quality assurance investment execution: 30%	2. Quality assurance investment execution: 33%	○
		1. Strengthen quality check functions through third-party audits of product departments, including at Group companies: 10 departments 2. Permeate quality compliance awareness e-learning participation rate: 100% of planned participants	1. Strengthen quality check functions through third-party audits of product departments, including at Group companies: 10 departments 2. Permeate quality compliance awareness e-learning participation rate: 100% of planned participants	○
		Major quality problems: 0	Major quality problems: 0	○
	Improve the level of information security	1. Thorough management of vulnerabilities 2. Improve resilience against cyberattacks	1.Conducted issue analysis and strengthened response measures 2.Conducted training programs and phishing email simulation exercises	–
	Coexist with local communities, society, and nature	Serious environmental or disaster accidents: 0	Serious environmental or disaster accidents: 0	○
		1. Continue improving efforts towards more transparency in steelworks 2. Create opportunities for communication with local communities at business sites and conduct social contribution activities tailored to local needs	1. • Opened manufacturing sites to local communities and held festivals and other community events. • Conducted plant tours primarily for elementary and junior high school students living near business sites. 2. • Employees visited local elementary and junior high schools to deliver outreach classes on the steel manufacturing process and career development. • Organized various sporting events for local residents as well as elementary and junior high school students. • Held baseball clinics led by the East and West baseball teams and running clinics led by the track and field team for local children.	○
		New collaborative activities with local governments to improve blue carbon and marine area environments: +2 projects per year	New collaborative activities with local governments to improve blue carbon and marine area environments: +2 projects per year	○
		Conduct conservation activities (i.e., reforestation) and assess biodiversity impacts in the infrastructure construction sector	Conducted biodiversity impact evaluations in the infrastructure construction sector	○
	Maintain sound financial position	[Eighth Medium-term Business Plan Targets] 1. Debt/EBITDA ratio: Approx. 3 times 2. D/E ratio: Approx. 60%	1. Debt/EBITDA ratio: Approx. 4.8 times 2. D/E ratio: Approx. 59.4%	×

Fiscal 2026 KPIs

Areas of Focus	Material Issues	Aspirations	FY2026 KPIs
Address climate change issues	**Reduce the JFE Group's GHG emissions and contribute to reducing GHG emissions across society**	Steel business FY2030 GHG emissions reduction rate: 30% or more FY2027 GHG emissions reduction rate as a milestone: 24% or more (compared to FY2013)	1. Approval rate for GX investment designed to reduce GHG emissions by 30% or more by FY2030: 98% 2. GX steel sales: 200,000 tonnes per year
		Engineering business Reduction rate of CO_2 emissions in owned plants and offices: 40% or more (compared to FY2013)	Promote use of own renewable energy Non-fossil fuel electricity use: 90% or more
		Engineering business Contribution to reduction in CO_2 emissions: 13.5 million tonnes per year	Contribute to reduction of CO_2 emissions in society by providing renewable energy power generation facilities and expanding the power supply business: 13.0 million tonnes per year
		Trading business Domestic CO_2 emissions reduction rate (compared to FY2019) FY2027: –27.5%　FY2030: –35%	FY2026 domestic CO2 emissions: reduce 25% (compared to FY2019)
Contribute to the realization of a recycling-oriented society	**Promote initiatives for realizing a circular economy**	Steel business Improve resource recycling of iron sources, co-products, etc.	1. Expand collection and use of collected "return scrap": 2.5 times (compared to average volume under the Seventh Medium-term Business Plan) 2. Recycle co-products generated in the Company (recycling rate of slag, dust, sludge, etc.): 99% or more 3. Expand use of steel slag products for marine area use (cumulative total under the Eighth Medium-term Business Plan): 140,000 tonnes
		Engineering business Expand bases for business that contribute to a circular economy	Expand bases for recycling/new regional electricity/waste-to-energy power generation business, etc. (cumulative total under the Eighth Medium-term Business Plan): 6 sites or more
		Trading business Expand products that contribute to a circular economy	Expand product lineup to contribute to a circular economy • Under the Eighth Medium-term Business Plan, increase the number of targeted product lines selling 6,000 tonnes per year or more by at least three
Acquire robust profitability	Steel business **Improve sales and manufacturing capabilities, expand and advance business areas**	Expand domestic steelmaking business profitability: ¥90 billion	1. Companywide OPY: +0.6% (compared to FY2024 results) 2. Develop new products and technologies: 20 or more 3. Increase the percentage of total revenue from high-value-added products to 56% 4. Improvements through streamlining (core systems, data science, automation) and labor productivity enhancement: Achieved FY2027 target of 50% 5. Time saved by generative AI and low-code development: 8,500 hours per month 6. Labor-saving initiatives in response to declining labor force and population (Eighth Medium-term Business Plan): Reduced by more than 200 employees
		Expand profits in the overseas steel business, domestic Group companies business, and solutions business Overseas steel: ¥75 billion Domestic Group companies: ¥90 billion Solutions business: ¥15 billion	1. Overseas steel business profit: ¥45 billion 2. Domestic Group companies business profit: ¥80 billion 3. Solutions business profit: ¥15 billion 4. Increase in foreign patent applications: 114%
	Engineering business **Improve profitability and competitiveness, promote investment in growth areas**	ROS: 6%	Improve project profitability Proportion of high-value-added and differentiated projects: Aim for over 50% by FY2027, and over 45% by FY2026
		Stabilize profits by expanding scale of O&M business	O&M business sales: Over ¥330 billion
		Improve labor productivity	Progress of operational reforms (to improve business efficiency by FY2035): Completed workflow analysis for specified departments in FY2026, aiming to complete optimization of all business processes in FY2027
		Expand DX solution revenue	Accelerate the expansion of our sales channels by conducting a full revision of related measures and strengthening the framework for these efforts Increase the number of new customers by 13% in FY2026 (compared to FY2024) and aim to achieve a 20% increase in FY2027
	Trading business **Revitalize the management foundation and advance insider status in overseas growth markets**	Overhaul core systems	• Aim to complete core system overhaul by FY2027 • FY2026: Begin action on the 26 measures to overhaul Companywide operation processes and achieve a 100% implementation rate for the seven key measures
		Trade and business profit: ¥30 billion each	Implement growth investments to achieve profits (¥85 billion over 3 years)

Areas of Focus	Material Issues	Aspirations	FY2026 KPIs
Promote human capital management	**Promote talent acquisition and development**	Build a talent portfolio to realize business strategies	Steel business 1. New international employees trained (cumulative total for FY2025–2026): 66 or more 2. Advanced DX employees trained (cumulative): 1,000
			Engineering business 1. New international employees trained (cumulative total for FY2025–2026): 25 2. Advanced DX employees trained (cumulative total for FY2025–2026): 90
			Trading business New overseas secondments (cumulative total for FY2025–2026): 50
	Promote diversity, equity and inclusion	Realize an environment in which the experience, abilities, and individuality of diverse talent can be maximized	1. Women in managerial positions: Aim for at least 10% in positions qualified as section manager or above by 2030 (including at least 20% in management and sales departments), with a target of achieving 7.0% by April 2027 2. Percentage of male employees taking childcare leave: 70% or more
	Improve work engagement	Realize an environment in which every employee can maximize their potential	Engagement survey Affirmative response to questions about job satisfaction: Steel business 75% or more Engineering business 80% or more Trading business 80% or more
Ensure occupational safety and health for employees	**Prevent workplace accidents**	Establish safe work environment to achieve zero accidents	Serious injuries: 0 Lost-workday injuries: Steel business 0.10 or less Engineering business 0.25 or less Trading business 0.15 or less
	Promote health and productivity management	Realize a workplace in which everyone can work with good physical and mental health for a long time	Proportion of employees who are physically and mentally healthy and working at an 80% or higher performance level (presenteeism below 20%): 67% or higher
Minimize risks to the business foundation	**Respect the human rights of each person involved in our business**	Identify, prevent, and mitigate adverse impacts on human rights in the supply chain	1. 100% attendance from the target audience for human rights awareness training 2. Promote human rights due diligence Promote the following initiatives to realize respect for human rights throughout the supply chain: • Continue conducting human rights due diligence at both the Company and Group companies • Build a system for managing human rights risks of suppliers
	Ensure adherence to corporate ethical standards and compliance	Raise awareness of compliance	1. Compliance training participation rate: 100% 2. Percentage of positive responses to questions regarding the enhancement of compliance awareness in the awareness survey related to corporate ethics: 90% or more (once every two years)
	Promote appropriate quality assurance	Steel business Zero serious quality assurance issues	1. Quality audit implementation at Group companies: 100% of planned number 2. Quality assurance investment execution (cumulative): 63%
		Engineering business Zero quality compliance violations	1. Strengthen quality check functions through third-party audits of product departments, including at Group companies: 10 departments 2. Permeate quality compliance awareness e-learning participation rate: 100% of planned participants
		Trading business Consistently deliver products that satisfy quality requirements	Major quality problems: 0
	Improve the level of information security	Continue zero serious security incidents (Level 3 incidents that impact the business foundation)	1. Thorough management of vulnerabilities 2. Improve resilience against cyberattacks
	Coexist with local communities, society, and nature	Steel business Ensure that steelworks and other plants are trusted by their local communities	Serious environmental or disaster accidents: 0
			1. Continue and bolster efforts towards more transparency in steelworks 2. Create opportunities for communication with local communities at business sites and conduct social contribution activities tailored to local needs
		Steel business Expand contributions to biodiversity	New collaborative activities with local governments to improve blue carbon and marine area environments: +2 projects per year
		Engineering business Advance efforts to biodiversity conservation	Implementation of biodiversity impact evaluations in the infrastructure construction sector
	Maintain sound financial structure	R&I rating: AA	【Eighth Medium-term Business Plan Targets】 1. Debt/EBITDA ratio: Approx. 3 times 2. D/E ratio: Approx. 60%

Progress under JFE Vision 2035 and the Eighth Medium-term Business Plan

The JFE Group has been pursuing initiatives for achieving sustainable growth and enhancing corporate value by pledging to take on the challenges of the most transformative period in the Group's history to ensure a prosperous future for the planet.

In FY2025, we addressed climate change as a top-priority business issue and worked toward meeting our FY2030 target of reducing GHG emissions in our steel business by at least 30% over FY2013. We are steadily promoting technological development and capital investment, including planning for the introduction of an innovative electric arc furnace*, while also laying the groundwork for our emissions reduction targets. As the business environment for our steel business continues to be challenging, we strived to improve profitability, including increasing the ratio of high-value-added products and reducing costs, with a certain level of success. However, due to such factors as raw material prices and market conditions, consolidated business profit for FY2025 fell short of expectations at 135.3 billion yen. To achieve the FY2027 segment profit target of 365.0 billion yen set out in our Eighth Medium-term Business Plan, we will steadily restructure our domestic production system and develop the "from the inside" business model in overseas growth markets to further improve profitability. Under these circumstances, we believe that two of the greatest concerns stakeholders have with regard to the JFE Group are: (1) its economic outlook, or whether it can achieve sustainable growth amid the changing environment of intensifying competition, and (2) its response to carbon neutrality, or whether it can meet the technological and financial challenges to achieving carbon neutrality. To address these issues, we will work to enhance our medium- to long-term corporate value under our long-term JFE Vision 2035 by restructuring our business portfolio, increasing the ratio of high-value-added products, and improving capital efficiency, while balancing environmental and economic values.

*A large, high-efficiency electric arc furnace capable of producing high-grade and high-function steel products

> **JFE Group Long-term Vision "JFE Vision 2035" and Eighth Medium-term Business Plan (FY2025–FY2027)**
(https://www.jfe-holdings.co.jp/en/investor/management/plan/)

JFE Group's Aspirations

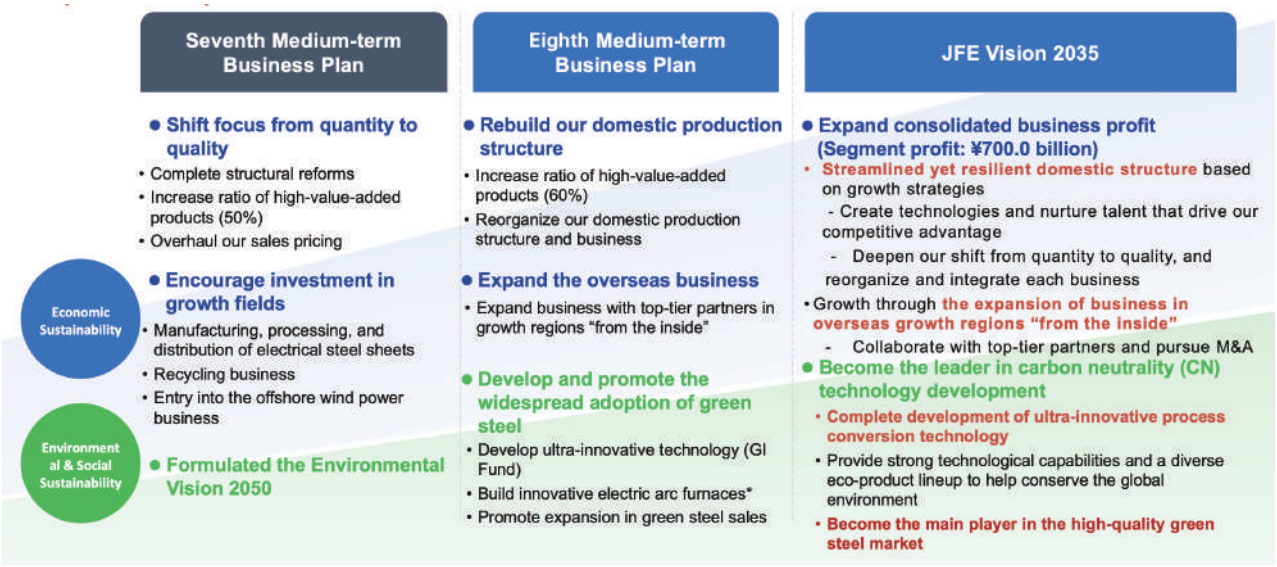
Our Corporate Purpose

The JFE Group reexamined how each business should leverage its strengths to fulfill its role and contribute to society. And through extensive participation and discussion by employees in operating companies, we defined our corporate purpose as follows.



Envisioning the JFE Group in 2035 with the JFE Vision 2035

In accordance with the JFE Group's Corporate Vision and Standards of Business Conduct and the corporate purpose formulated by each operating company, we have defined the JFE Group aspiration as "becoming the leader in carbon neutrality (CN) technology development." We also set the target of 700 billion yen in consolidated business profit as the level of profit necessary for developing technologies and making capital investments to achieve CN by 2050. Furthermore, we have formulated the Eighth Medium-term Business Plan (FY2025–2027) to promote growth strategies for realizing the JFE Group's aspirations in the face of a challenging business environment.



Sustainability Initiatives of the Eighth Medium-term Business Plan

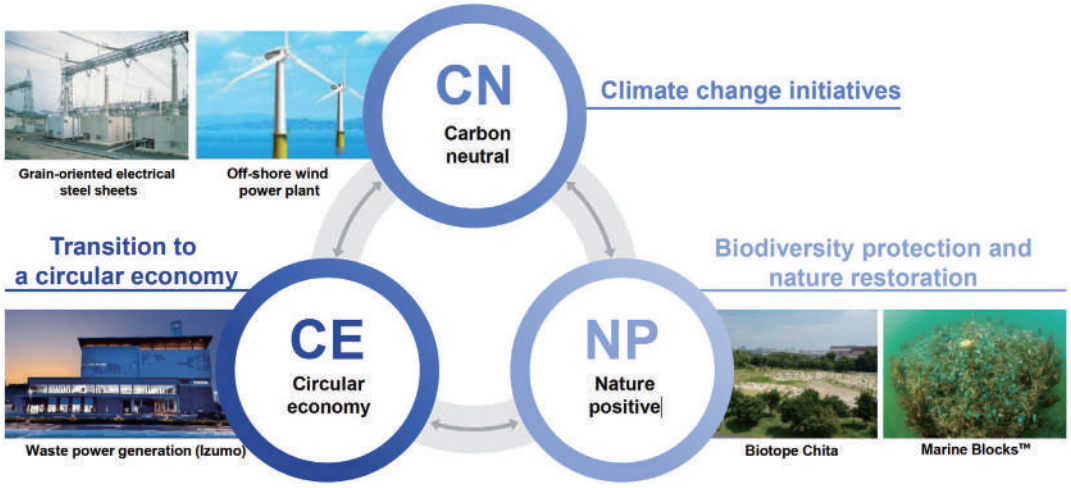
Following the formulation of our Eighth Medium-term Business Plan, we reviewed our material issues of corporate management and KPIs. We extracted and scrutinized the necessary initiatives for the JFE Group to achieve sustainable growth by backcasting from our past initiatives on environmental and social issues and long-term vision and identified 16 material issues.

› **Process for Identifying Material Issues of Corporate Management** (P. 14)
› **KPIs for FY2026** (P. 22)

Initiatives for Environmental Sustainability

In addition to climate change, a top-priority business issue under the previous medium-term business plan, we will proactively strive Groupwide to drive the transition to a circular economy and engage in biodiversity conservation and nature-positive initiatives under the current medium-term business plan.

- **The entire JFE Group will contribute greatly to the global environment and society by working proactively on the transition to a circular economy, biodiversity conservation, and nature positivity, with a focus on the climate change problem.**



Adapted based on "Status of the Environment, Economy, and Society, and Direction of Environmental Measures" published by Japan's Ministry of the Environment in January 2023.

Initiatives to Address Climate Change Issues

We will further promote initiatives for achieving carbon neutrality by 2050, guided by the JFE Group Environmental Vision for 2050, formulated in 2021. In the steel business, we will position the current medium-term business plan period as a preparatory phase toward achieving the FY2030 target of reducing GHG emissions by at least 30% compared to levels in FY2013 and completing as scheduled the development of ultra-innovative technologies in FY2035. Accordingly, we will continue working to roll out the innovative electric arc furnace in the Kurashiki district of the West Japan Works in Okayama Prefecture and develop ultra-innovative technologies. In the engineering business, we will work to achieve the FY2030 target of reducing GHG emissions across society by 20 million tonnes by capturing the demand for offshore wind power while also seeking to win EPC* orders and participate in projects in the hydrogen, ammonia, and carbon capture and storage areas, where social implementation is expected to advance in the years ahead.

*Projects in which the engineering, procurement, and construction processes are undertaken as a single package.

› **Initiatives to Address Climate Change** (P. 49)
› **JFE Group Environmental Vision for 2050** (P. 49)

Initiatives to Realize a Circular Economy

The JFE Group is focusing on the priority issues of expanded the use and sales of recycled materials, development of resource-efficient eco-products and eco-solution technologies, and conversion of byproducts and waste into resources, and it will promote initiatives that leverage the strengths of each operating company and Group synergies.

› **Initiatives to Transition to a Circular Economy** (P. 126)

Initiatives to Promote Biodiversity Conservation and Nature Positive

By deepening our awareness that the JFE Group's business activities depend on and impact biodiversity and natural capital, we will promote initiatives to mitigate the associated risks. At the same time, we will not only develop processes, products, and technologies that contribute to these initiatives but also advance activities through diverse approaches, including collaborating with local communities and the supply chain. The JFE Group also endorses the TNFD* recommendations and will disclose information in line with the TNFD framework to share information with society at large.

*Taskforce on Nature-related Financial Disclosure

› **Biodiversity Conservation and Nature Positive** (P. 154)

Promoting Our Human Resources Strategy and Human Capital Management

The JFE Group believes that human resources are the driving force for corporate growth in times of transformation. In executing and realizing our management strategies, we formulated our human resources strategy from a long-term perspective with the understanding that the Company's sustainable growth must be actively linked with the personal growth of employees. This strategy focuses on securing skilled resources to build our talent portfolio, advancing DEI to maximize individual capabilities, and enhancing work engagement.

› **Human Capital** (P. 186)

Corporate Governance

We transitioned to being a company with an Audit & Supervisory Committee with the aim of swiftly responding to rapid and major changes in the environment surrounding the Company, such as carbon neutrality and DX. We will further advance initiatives undertaken in the previous medium-term business plan for enhancing the effectiveness of the Board of Directors and strengthening its supervisory functions. By doing so, we will strive to accelerate management decision-making, enrich Board member discussions on management policies and strategies, and further strengthen the Board's supervisory role. We will also introduce new indicators to calculate ESG remuneration for directors.

› **Corporate Governance** (P. 248)

Major Performance and Profitability Targets, Shareholder Returns Policy

Major performance and profitability targets for the current medium-term business plan are listed below. We consider returning profit to shareholders as one of the top management priorities. We will proactively distribute dividends while striving to ensure the entire Group's sustainable corporate structure. While we intend to maintain a dividend payout ratio of around 30%, our policy is to set a minimum of 80 yen per share from the perspective of conducting stable dividends.

FY2025 Results and FY2026 Estimates for Groupwide Performance and Profitability Targets and Shareholder Returns Policy

			Eighth Medium-term Business Plan FY2027	FY2025 Results	FY2026 Estimates
JFE Group	Consolidated business profit		400.0 billion yen	135.3 billion yen	215.0 billion yen/year
	ROE		10% or more	2.7%	About 6%
	Debt/EBITDA		About 3 times	4.8 times	4.8 times
	D/E		About 60%	59.4%	66.6%
Operating Companies	Steel business	Segment profit	260.0 billion yen	38.0 billion yen	100.0 billion yen/year
	Engineering business	Segment profit	42.0 billion yen	23.9 billion yen	25.0 billion yen/year
	Trading business	Segment profit	60.0 billion yen	40.2 billion yen	45.0 billion yen/year
Shareholder Returns	Dividend Policy		Payout ratio of around 30% with minimum set at 80 yen per share	72.5%	33.9%

For measures of each operating company, refer to JFE GROUP REPORT 2026 (Integrated Report)

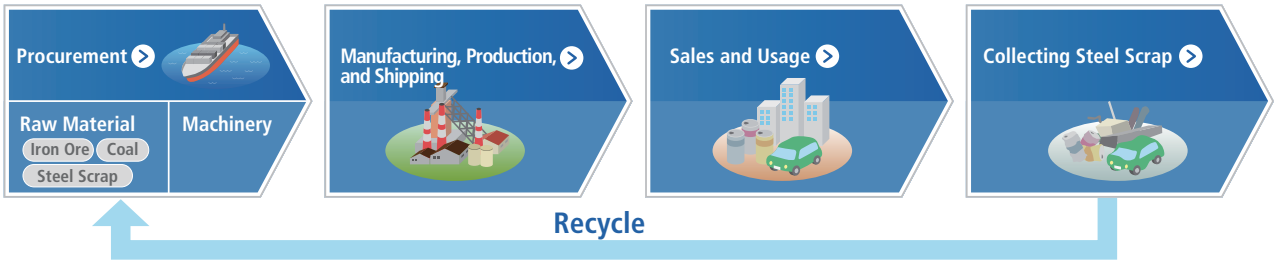
› **JFE GROUP REPORT 2026 (Integrated Report)** (https://www.jfe-holdings.co.jp/en/investor/library/group-report/)

JFE Group Value Chain

The JFE Group's value chain encompasses upstream and downstream activities across the globe. We seek to address social challenges by identifying the risks and opportunities that the Group must resolve through its business operations and pursue initiatives that tackle those challenges. We will also continue to strengthen the sustainability of the entire Group and implement countermeasures throughout our value chain.



Overview of the Value Chain



Procurement

To ensure stable supply of iron ore and coal used as raw materials in the production of steel products, we purchase from various sources around the world such as Australia and South America and transport materials to the steelworks on a special vessel. Equipment and materials used at steelworks plants are also purchased globally, and we promote the recycling of steel scrap from the steelmaking process. JFE Steel has established these JFE Steel Procurement Guidelines in accordance with the JFE Group Standards of Conduct and the JFE Group Basic Policy on Human Rights, to enhance sustainability across its entire supply chain. We share these guidelines with our business partners and promote sustainability initiatives throughout our supply chain.

Manufacturing, Production, and Shipping

The JFE Group is one of the world's largest steelmakers, with cutting-edge technologies for the efficient production and stable supply of high-quality steel products used in products indispensable to daily life, including automobiles, infrastructure, and home appliances. We also promote resource recycling by repurposing iron and steel slag generated in the process of producing steel into such products as cement and other construction materials. In addition, we are planning to use such slag in environment recovery materials such as "Marine Stone™," which works effectively as a base for the adhesion of organisms and for improving the marine environment.

Sales and Usage

We pay due consideration for the global environment in our own steel production processes as well as by developing eco-products and solution technologies that contribute to the reduction of GHG emissions across society. Furthermore, we work at the frontier of production by responding to the diverse needs of different industries through research and development and by improving production technologies.

Collecting Steel Scrap

We collect steel scrap generated by customers after processing and use, as well as scrap from the market, and repurpose it as raw material for steelmaking.

Risks and Opportunities in the Value Chain

Challenges in the Value Chain	Procurement		Manufacturing, Production, and Shipping	Sales and Usage	Collecting Steel Scrap
	Raw Material Iron Ore/Coal/ Steel Scrap	Machinery			
Address Climate Change Issues					
The JFE Group views climate change as a critical managerial concern from the perspective of business continuity, and it considers achieving carbon neutrality by 2050 a top priority. By designating climate change issue as a material issue of corporate management, we are actively tackling the challenge to resolve this issue.					
Risks • Increased instability in raw material procurement • Decline in production caused by typhoons, heavy rains, or droughts at manufacturing sites • Burden of investment required for introducing new technologies to realize large-scale decarbonization • Introduction of carbon pricing • Intensified competition and surge in the price of cold iron sources (scrap and reduced iron) • Increased demand for electricity due to a transition from blast furnaces to electric arc furnaces • Decline in the sales volume of steel products due to a reduction in internal combustion engines caused by the spread of EVs, and the shift to alternative materials caused by multi-material manufacturing	●	●	●	●	●
Opportunities • Increased demand for steel products with high environmental value for achieving decarbonization • Growth in demand for products used in EVs caused by expanded production of EVs	●	●	●	●	●

Key Initiatives

› Initiatives to Address Climate Change (P. 49)

Related Pages

› Policy Engagement (P. 89) › Identification and Assessment of Risks and Opportunities (TCFD Scenario Analysis) (P. 113)
› Supply Chain Management (P. 233) › Environmental Data (P. 273)

Contribute to the Realization of a Recycling-Oriented Society					
Recognizing that the transition to a circular economy is essential for realizing a circular society, we will advance this initiative beyond the scope of the JFE Group through collaboration with our value chain partners. We will work to convert byproducts and waste into resources, develop resource-efficient eco-products and solution technologies, and expand the use and sale of recycled resources.					
Risks • Resource depletion • Shortage of disposal sites for waste generated • Declining in the grade, rising price, and difficulty of obtaining obsolete scrap	●	●	●		●

Challenges in the Value Chain	Procurement		Manufacturing, Production, and Shipping	Sales and Usage	Collecting Steel Scrap
	Raw Material Iron Ore/Coal/ Steel Scrap	Machinery			
Opportunities • Renewed interest in recyclability of steel products • Increased demand for eco-products and solutions • Expanded use and sales of steel slag products and steel scrap • Increased demand for recycled materials	●		●	●	●

Key Initiatives

> **Initiatives to Transition to a Circular Economy** (P. 126)

Related Pages

> **Environmental Data** (P. 273)

Acquire Robust Profitability

To achieve the JFE Vision 2035, the JFE Group's Aspirations for 2035, we will strive to construct a streamlined yet resilient domestic structure based on growth strategies and realize growth through the expansion of business in overseas growth regions "from the inside."

Risks • Decline in domestic demand • Difficulty in securing human resources due to the contraction of Japan's labor force • Stagnation in the drive for decarbonization • Expansion in markets for low-priced products from overseas and other competitors • Tighter tariff policies and the rise of protectionism in various countries • Improvement in technological capabilities of overseas competitors			●	●	●
Opportunities • Increased demand for eco-products that contribute to reducing CO_2 emissions (steel sheets, high-strength steel sheets, etc.) • Increased demand for GX steel and steel products used for new energy applications • Progress in the development of a circular economy • Capture demand in overseas growth markets			●	●	●

Key Initiatives

> **Initiatives to Address Climate Change** (P. 49) > **Initiatives to Transition to a Circular Economy** (P. 124)

> **Human Capital** (P. 186)

Related Pages

> **JFE Group Report** (https://www.jfe-holdings.co.jp/en/investor/library/group-report/)

> **JFE Group Long-term Vision "JFE Vision 2035" and the Eighth Medium-term Business Plan (FY2025-FY2027)** (https://www.jfe-holdings.co.jp/en/investor/management/plan/)

> **DX REPORT** (https://www.jfe-holdings.co.jp/en/investor/library/dxreport/)

Challenges in the Value Chain	Procurement		Manufacturing, Production, and Shipping	Sales and Usage	Collecting Steel Scrap
	Raw Material Iron Ore/Coal/ Steel Scrap	Machinery			
Ensure Occupational Safety and Health for Employees					
Ensuring the occupational safety and health of employees is a basic corporate requirement for manufacturers and is fundamental to the continued existence of any company. The JFE Group adheres to the philosophy of safety first, and, together with its Group companies and partner companies (including contractors), is promoting safety and health activities to create safe and healthy workplaces where all employees remain physically and mentally fit as they continue working for many years.					
Risks • Occurrence of accidents, including occupational injuries • Talent drain			●	●	
Opportunities • Stable recruitment of human resources and improvement in labor productivity			●	●	
Key Initiatives › **Occupational Health and Safety** (P. 202) **Related Pages** › **Social Data** (P. 286)					
Promote Human Capital Management					
The JFE Group believes that human resources are the driving force for corporate growth in times of transformation. In executing and realizing our management strategies, we formulated our human resources strategy from a long-term perspective with the understanding that the Company's sustainable growth must be actively linked with the personal growth of employees. This strategy focuses on securing skilled resources to build our talent portfolio, advancing DEI to maximize individual capabilities, and enhancing work engagement.					
Risks • Labor shortage • Talent drain • Culture of passing down technical skills is dying out	●	●	●	●	●
Opportunities • Acquisition of diverse talent for promoting the Company's growth strategies • Improvement in employee engagement • Improvement in labor productivity			●	●	
Key Initiatives › **Human Capital** (P. 186) › **Promoting Diversity, Equity and Inclusion (DEI)** (P. 190) › **Promoting Talent Acquisition and Development** (P. 188) › **Improving Work Engagement** (P. 195) **Related Pages** › **Supply Chain Management** (P. 233) › **Social Data** (P. 286)					

Challenges in the Value Chain	Procurement		Manufacturing, Production, and Shipping	Sales and Usage	Collecting Steel Scrap
	Raw Material Iron Ore/Coal/ Steel Scrap	Machinery			
Minimize Risks to the Business Foundation					
To achieve the JFE Group's sustainable growth and enhance corporate value, we will promote the establishment and operation of a risk management system to accurately identify and appropriately address risks across the Group.					
Risks • Occurrence of human rights issues and violation of laws and regulations, etc. • Information leaks and system failures caused by cyber-attacks or improper system use • Production and quality issues, decline in customer trust • Deterioration in relationship with local communities • Lack of adequate responses to stricter environmental regulations • Contamination of a drainage destination • Difficulty in fund procurement	●	●	●	●	●
Opportunities • Expansion in sustainable procurement and construction of a stable procurement system • Competitive advantage based on stable production and quality • Diversification in fund procurement	●	●	●	●	●

Key Initiatives

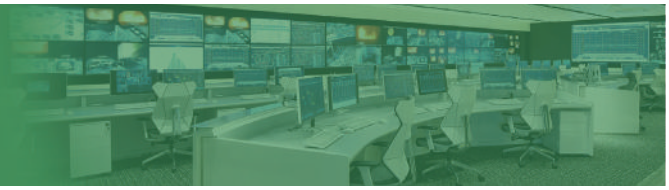
› **Biodiversity Conservation and Nature Positive** (P. 154) › **Compliance** (P. 263) › **Risk Management** (P. 269)

Related Pages

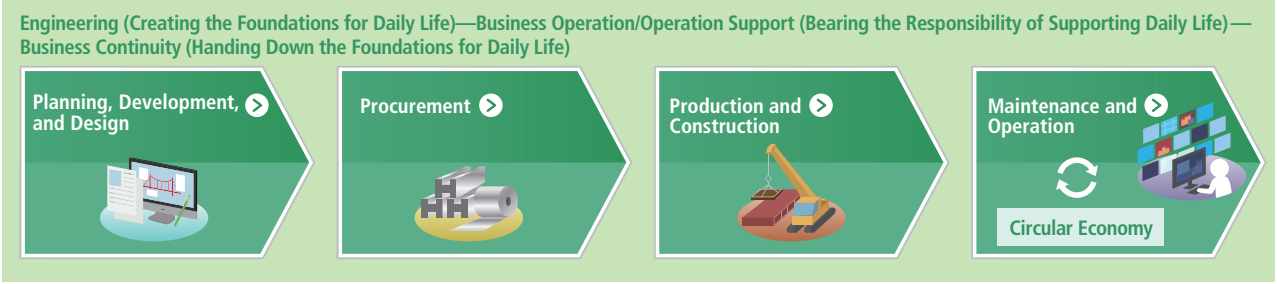
› **Environmental Data** (P. 273) › **Supply Chain Management** (P. 233) › **Governance Data** (P. 292)

› **DX REPORT** (https://www.jfe-holdings.co.jp/en/investor/library/dxreport/)

Engineering Business



Overview of the Value Chain



Engineering (Creating the Foundations for Daily Life)

The JFE Group has built many high-functioning, high-quality facilities in fields such as energy, the environment, and bridges while satisfying the needs of our customers every step of the way, from design to delivery. We have combined and evolved the technologies for processing and assembling in shipbuilding business and technologies relating to materials and combustion in the steel business to create next-generation energy and to address environmental issues. Many of our technologies support society. In addition, we are assembling our resources to develop new business models and technologies based on existing technologies. We produce high-quality products at low cost by establishing production sites, including one of the largest steel structure production factories in Japan, overseas bases centered on Asian countries, and global engineering structures.

Business Operation/Operation Support (Bearing the Responsibility of Supporting Daily Life)

The JFE Group engages in many private-public initiatives in the field of public services by applying the operational and maintenance know-how acquired over many years, primarily with regard to the environment and water and sewage plants. Furthermore, we build plants, engage in the recycling business and renewable energy business, and take the initiative to realize a recycling-oriented sustainable society. Going forward, we intend to expand our initiatives even further.

Business Continuity (Handing Down the Foundations for Daily Life)

The JFE Group is committed to the construction, operation, and maintenance of infrastructure facilities such as plants related to energy and the environment, bridges, and coastal structures to hand down safe and secure foundations for the next generation.

Risks and Opportunities in the Value Chain

Challenges in the Value Chain	Planning, Development, and Design	Procurement	Production and Construction	Maintenance and Operations
Address Climate Change Issues				
The JFE Group strives to reduce CO_2 emissions in society through its eco-friendly products and technologies, including renewable energy technologies and energy-saving products in its engineering business. The Group designates climate change as a material issue of corporate management and is tackling the challenge to resolve this issue.				
Risks • Damages incurred by typhoons, heavy rains, or drought at its manufacturing and construction sites	●	●	●	●
Opportunities • Growing demand for strengthening infrastructure and addressing disasters • Greater opportunities for decarbonization and solution businesses	●	●	●	●

Key Initiatives

› Initiatives to Address Climate Change (P. 49)

Related Pages

› Policy Engagement (P. 89) › Identification and Assessment of Risks and Opportunities (TCFD Scenario Analysis) (P. 113)
› Supply Chain Management (P. 233) › Environmental Data (P. 273)

Contribute to the Realization of a Recycling-Oriented Society				
Recognizing that the transition to a circular economy is essential for realizing a circular society, we will advance this initiative beyond the scope of the JFE Group through collaboration with our value chain partners. We will work to convert byproducts and waste into resources, develop resource-efficient eco-products and solution technologies, and expand the use and sale of recycled resources.				
Risks • Lack of disposal sites for waste generated • Depletion of resources		●	●	●
Opportunities • Increased demand for waste-to-resource technologies (plastics recycling, food waste power generation) • Growing demand for more resilient, longer-lasting infrastructure • Growing need for improving operational efficiency and reducing environmental impact	●	●	●	●

Key Initiatives

› Initiatives to Transition to a Circular Economy (P. 126)

Related Pages

› Environmental Data (P. 273)

Challenges in the Value Chain	Planning, Development, and Design	Procurement	Production and Construction	Maintenance and Operations
Acquire Robust Profitability				
To achieve the JFE Vision 2035, we will strengthen our earnings base by leveraging our diverse business portfolio, while expanding our business operations by transitioning to a circular economy.				
Risks • Decline in domestic demand • Difficulty in securing human resources due to the decrease in Japan's labor force • Stagnation in the drive for decarbonization	●	●	●	●
Opportunities • Increased demand for carbon neutral plants, growing need for renewable energy • Capture demand in overseas growth markets	●	●	●	●

Key Initiatives

› **Initiatives to Address Climate Change** (P. 49) › **Initiatives to Transition to a Circular Economy** (P. 126)
› **Human Capital** (P. 186)

Related Pages

› **JFE Group Report** (https://www.jfe-holdings.co.jp/en/investor/library/group-report/)
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› **DX REPORT** (https://www.jfe-holdings.co.jp/en/investor/library/dxreport/)

Challenges in the Value Chain	Planning, Development, and Design	Procurement	Production and Construction	Maintenance and Operations
Ensure Occupational Safety and Health for Employees				
Ensuring the occupational safety and health of employees is a basic corporate requirement for manufacturers and is fundamental to the continued existence of any company. The JFE Group adheres to the philosophy of safety first, and, together with its Group companies and partner companies (including contractors), is promoting safety and health activities to create safe and healthy workplaces where all employees remain physically and mentally fit as they continue working for many years.				
Risks • Occurrence of accidents, including occupational injuries • Talent drain	●		●	●
Opportunities • Stable recruitment of human resources • Improvement in labor productivity	●		●	●

Key Initiatives

› **Occupational Health and Safety** (P. 202)

Related Pages

› **Social Data** (P. 286)

Challenges in the Value Chain	Planning, Development, and Design	Procurement	Production and Construction	Maintenance and Operations
Promote Human Capital Management				
The JFE Group believes that human resources are the driving force for corporate growth in times of transformation. In executing and realizing our management strategies, we formulated our human resources strategy from a long-term perspective with the understanding that the Company's sustainable growth must be actively linked with the personal growth of employees. This strategy focuses on securing skilled resources to build our talent portfolio, advancing DEI to maximize individual capabilities, and enhancing work engagement.				
Risks • Labor shortage • Talent drain • Culture of passing down technical skills is dying out	●	●	●	●
Opportunities • Acquisition of diverse talent for promoting the Company's growth strategies • Improvement in employee engagement • Improvement in labor productivity	●	●	●	●

Key Initiatives

› **Human Capital** (P. 186) › **Promoting Diversity, Equity and Inclusion (DEI)** (P. 190)
› **Promoting Talent Acquisition and Development** (P. 188) › **Improving Work Engagement** (P. 195)

Related Pages

› **Supply Chain Management** (P. 233) › **Social Data** (P. 286)

Minimize Risks to the Business Foundation				
To achieve the JFE Group's sustainable growth and enhance corporate value, we will promote the establishment and operation of a risk management system to accurately identify and appropriately address risks across the Group.				
Risks • Occurrence of human rights issues and violation of laws and regulations, etc. • Information leaks and system failures caused by cyber-attacks or improper system use • Production and quality issues, decline in customer trust • Deterioration in relationship with local communities • Lack of adequate responses to stricter environmental regulations • Contamination of a drainage destination • Difficulty in fund procurement	●	●	●	●
Opportunities • Expansion in sustainable procurement and construction of a stable procurement system • Competitive advantage based on stable production and quality • Diversification in fund procurement	●	●	●	●

Key Initiatives

› **Biodiversity Conservation and Nature Positive** (P. 154) › **Compliance** (P. 263) › **Risk Management** (P. 269)

Related Pages

› **Environmental Data** (P. 273) › **Supply Chain Management** (P. 233) › **Governance Data** (P. 292)
› **DX REPORT** (https://www.jfe-holdings.co.jp/en/investor/library/dxreport/)

Stakeholder Engagement

To achieve sustainable growth and enhance corporate value over the medium to long term, the JFE Group endeavors to maintain agreeable and favorable relationships with stakeholders by paying due consideration to the impact of its business on all stakeholders, including shareholders, customers, clients, employees, and local communities.

JFE Group Standards of Business Conduct

2 Be open to society

Proactively disclose corporate information and engage in constructive dialogues with diverse stakeholders to enhance our corporate value.

Engagement with Major Stakeholders

Engagement with Major Stakeholders in FY2025

ST JFE Steel EN JFE Engineering SH JFE Shoji

Major Stakeholders	Methods of Engagement	FY2025 Results	
Shareholders and Investors	Ordinary General Meeting of Shareholders	Once	Approx. 310,000 shareholders (number of unit shareholders)
	Individual meetings, primarily with institutional investors and securities analysts	In Japan: 64 companies (200 meetings) Overseas: 97 companies (232 meetings)	
	Meetings with shareholders, primarily ESG managers or those with voting rights at institutional investors	In Japan: 23 companies (42 meetings) Overseas: 18 companies (15 meetings)	
	Investor meetings and individual briefings on business strategy for analysts and persons responsible for ESG	8 times	Approx. 1,300 persons in total
	In-person and online business site and plant tours primarily for individual shareholders	16 times	Approx. 2,700 persons in total
	Various reports, including the JFE GROUP REPORT and JFE Group Sustainability Reports*1	Once	Approx. 21,000 copies
	Information via websites, etc., for shareholders and investors	As needed	
Customers	Communication through sales activities and sales support for quality assurance	Conducted at each operating company	
	Interviews and questionnaires, such as those related to customer satisfaction	Conducted at each operating company	
	Information via websites (product information), etc.	As needed	
Suppliers	Communication through purchasing activities	Conducted at each operating company	
	Interviews and questionnaires	Conducted at each operating company	
	Briefings and exchanges of opinion	Conducted at each operating company	
	Information disclosure and other communication through the website	As needed	

Major Stakeholders	Methods of Engagement	FY2025 Results	
Employees	Communications through daily operations and in the workplace		As needed
	Internal newsletters and intranet		As needed
	Various labor-management committees	2 to 4 times	Management and labor unions at each operating company
	Cases handled by the Corporate Ethics Hotline and the harassment consultation desk	As needed	JFE Holdings and operating companies: 159 cases (146 cases at Group companies)
	Position-specific training on compliance and human rights	As needed	Conducted at each operating company
	Family days (visits by employee families, lunch at employees' cafeteria), etc.	ST 6 times EN 2 times SH 2 times	Conducted at each operating company
	Corporate Ethics Awareness Survey	Every other year	JFE Holdings and operating companies
	Engagement Survey*2	Once	JFE Holdings and operating Companies
	Management feedback*3	Once	JFE Holdings, JFE Steel, and JFE Engineering
Local Communities	Communication through local residents' association, events, etc.		As needed
	Events at manufacturing bases (festivals, etc.)	Once per region	Approx. 150,000 persons per year
	Plant tours	As needed	Approx. 90,000 persons per year
	Cleanup activities in the vicinity of manufacturing bases and local regions		As needed
	Sports promotion (baseball or jogging workshops, various sports competitions, etc.)		As needed
	Dispatch of lecturers to elementary schools, craft workshops, workplace experience events		ST 34 times EN 20 times SH 5 times
	Information via websites (environmental info, etc.)		As needed
	Social contribution through JFE 21st Century Foundation (http://www.jfe-21st-cf.or.jp/eng/index.html) (various research support, regional activity support, etc.)		As needed

*1 Number of issues published is for the JFE GROUP REPORT, and the JFE Group Sustainability Report is only posted online.
*2 Questionnaire targeting all employees for surveying the level of satisfaction and applying results to initiatives and operations.
*3 Corporate officers and managers are evaluated by co-workers and subordinates and receive feedback.

Engaging Our Shareholders and Investors

We work to disclose information accurately, fairly, and in a timely and appropriate manner as well as strive for active communication. We established the Investor Relations and Corporate Communications Department as an organization responsible for communication with domestic and international shareholders and investors, and to promote constructive dialogue as well as provide management with the information acquired, with the aim of maintaining and improving the relationship of trust.

Policy on Constructive Dialogue with Shareholders and Investors

The JFE Group endeavors to enhance corporate value sustainably through dialogues with shareholders and investors, and it has established the Investor Relations and Corporate Communications Department to be responsible for promoting such constructive dialogue. The director supervising the department and director in charge are responsible for such initiatives. The department takes the lead in ensuring organic collaboration between relevant departments by appropriately sharing information.

To promote active dialogue, JFE holds various briefings for institutional investors, including announcements of medium-term business plans and financial results by executive directors, and also arranges for visits to investors in Japan and overseas. With regard to individual shareholders and investors, JFE organizes briefings on corporate activity and tours of plants and other sites. Opinions, questions, and other information obtained through these dialogues are regularly collected and reported to directors and corporate officers.

In conducting the dialogues, JFE prevents any leaks of insider information and ensures fair disclosure by adhering to its disclosure policy. In addition, important press releases and IR materials are disclosed in English to provide the same information to overseas investors as to those in Japan.

For more on this, please refer to the following information.

- **Investor information** (https://www.jfe-holdings.co.jp/en/investor/index.html)
- **Plant tours (special benefit for shareholders) (Japanese only)** (https://www.jfe-holdings.co.jp/investor/stock/factory_tour/index.html)
- **Disclosure policy** (https://www.jfe-holdings.co.jp/en/investor/management/disclosure-policy/index.html)

General Meetings of Shareholders

General Meetings of Shareholders are opportunities for dialogue with shareholders, so JFE sends invitations at the earliest possible date to maximize attendance and avoid overlapping with the shareholder meetings of other companies. The Company has been posting an invitation on its website at the earliest possible date while allowing online voting for shareholders who are unable to attend. JFE also strives to provide the same information to overseas investors as it does in Japan by, for example, disclosing the convocation notice in English.

For more information on the General Meetings of Shareholders, please refer to the following.

- **General Meetings of Shareholders** (https://www.jfe-holdings.co.jp/en/investor/stock/general_meeting/index.html)

Engaging Our Customers

The Group believes that the stable supply of products and services and reliable quality assurance, along with advancing research and development, are necessary to meet customer needs.

We will work to establish win-win relationships by continuously meeting customer needs and the trust they place in us.

For more on this, please refer to the following information.
› **Provide Quality Products and Enhance Customer Satisfaction** (P. 226)

Engaging Our Suppliers

As a key business partner, we actively promote sustainability initiatives in cooperation with suppliers. We have established a basic purchasing (procurement) policy to promote fair and honest procurement activities and build sound relationships with suppliers.

For more on this, please refer to the following information.
› **Supply Chain Management** (P. 233)

Engaging Our Employees

Recognizing that human resources are the driving force behind corporate growth, top management has formulated human resources strategies aligned with our management strategies. It has also established the JFE Group's Basic Policy on Human Resource Management and the JFE Group Health Declaration to promote initiatives that maximize the talents and vitality of our human resources through aggressive investment in human capital.

For more on this, please refer to the following information.
› **Human Capital** (P. 186)

Engaging the Local Community

To ensure business continuity at manufacturing bases where steelworks are located and elsewhere, constructing a relationship of trust with citizens in local communities and realizing co-existence and prosperity are crucial.

We will pursue various activities with the aim of realizing sustainable growth and regional development, including continued initiatives toward ensuring safety and reducing our environmental impact.

For more on this, please refer to the following information.
› **Community** (P. 235)

Environmental Communication

The JFE Group gives utmost priority to communicating with all stakeholders, including in matters relating to the environment. In addition to disclosing environmental information, it carries out extensive two-way communication between the public and the business community by supporting and participating in environment-related activities outside the Group.

Disclosing Environmental Data

The East Japan Works of JFE Steel discloses real-time environmental data on local air and water quality. Visitors can review this information in the first-floor lobby of the Visitor Center in the Chiba district and in the Amenity Hall and the first-floor lobby of the Keihin Building in the Keihin district.



Environmental data display in the Keihin district

Dissemination of Environmental Information and Public Outreach

Commercial Video and Special Website about JFE

We created a commercial video and special website featuring the JFE Group's initiatives for a sustainable future to bring the Group closer to stakeholders. The video and website are titled "Sus-tetsu-nable!" with the word "tetsu" meaning iron inserted into the word "sustainable." We hope that the video and website will help the public better understand iron as an essential element for social infrastructure and recognize the Group's efforts as an indispensable member of society.

> Special website "Sus-tetsu-nable!" (Japanese only) (https://www.jfe-holdings.co.jp/sus-tetsu-nable/)

ecobeing Environmental Website

The JFE Group provides support to ecobeing, a web magazine operated by KLEE INC., which disseminates information on the environment under the slogan "Let's talk more with the Earth!" The website series "ecopeople" has featured people from a variety of fields and also introduced JFE Group employees and initiatives. To date, the magazine has covered JFE Steel's BETTER RECYCLE Shonan, featuring the project for addressing plastic pollution by increasing the application of steel sheets for can-making, the JFE Dragonfly Path in the Tsurumi Works of JFE Engineering, and the "Public-Private Partnership for Creating a Rich Marine Environment" with Yokohama City. In 2025, we introduced our biogas power generation project, conducted in partnership with the restaurant industry, which has a low recycling rate for food waste. The project collects food waste from restaurants to produce biogas through fermentation to generate electricity that is then supplied to partner shops. Many other activities and initiatives undertaken outside the JFE Group are also featured. By supporting this web magazine, the JFE Group seeks to help stimulate public discussion and awareness about ESG and the SDGs from an objective standpoint.

For further details, please refer to:

- **ecobeing (Japanese only)** (https://www.ecobeing.net/)
- **Collaboration on Biogas Power Generation for the Effective Use of Food Waste (Japanese only)** (https://www.ecobeing.net/ecotopics/#ecotopicsBI_3)
- **JFE Steel's steel slag products** (https://www.jfe-steel.co.jp/en/products/slag/index.html)

Sponsoring Midori no Komichi Environmental Diary

The JFE Group sponsors the Midori no Komichi (Green Trail) environmental diary project, an environmental education program hosted by Green Cross Japan to raise environmental awareness among elementary school children. Through writing diaries on environmental themes, children are encouraged to think about the global environment in relation to their daily lives, consider what they can do, discuss their ideas, and take action. By supporting this initiative, the JFE Group promotes independent learning and actions by children who will shape the next generation and thereby contribute to realizing a sustainable society.

Please see the following for further details.

- **Midori no Komichi Environmental Diary (Japanese only)** (https://www.midorinokomichi.net/)

Participation in Environmental Exhibitions Such as EcoPro 2025 and Tokyo Bay Festival 2025

The JFE Group showcases how its business activities address environmental issues by participating in various environmental exhibitions.

EcoPro 2025, one of the largest environmental exhibitions in Japan, was held in December 2025 at Tokyo Big Sight, and the JFE Group participated under the theme "Sus-tetsu-nable! Let's create an environmentally friendly loop for the future!" The JFE Group develops technologies and products that efficiently use limited resources without generating waste. At our booth, we explained the high recyclability of steel and showcased technologies such as environmentally friendly steel products, food recycling, horizontal recycling of PET bottles, reuse of iron and steel slag, and construction of infrastructure with longer service life so that visitors could learn about a circular society through JFE's business activities. In addition, we creatively enhanced our interactive exhibits including a VR-based factory tour. We welcomed many visitors, ranging from students, mainly from elementary and junior high schools, to working adults, providing opportunities to deepen their understanding of the JFE Group's environmental initiatives.



The JFE Group's booth at EcoPro 2025


Interactive exhibit

The JFE Group's eight companies jointly participated in the WIND EXPO at Tokyo Big Sight in March 2026. The WIND EXPO is one of the Smart Energy Week expos, a set of simultaneous expositions about seven new energy fields, and Japan's largest wind energy exposition that draws participants from around the world. We promoted our initiatives under categories such as foundational structures, construction, O&M, and the supply chain. We introduced how we became the first Japanese company to win an order for monopiles for a large-scale offshore wind power project in a general sea area and the start of operations at JFE Engineering's monopile manufacturing plant in Kasaoka, Okayama Prefecture, as well as the sales expansion of JFE Steel's high-quality large and heavy steel plate "J-TerraPlate™" and green steel product "JGreeX™." We also provided information on our plans to enter the monopile foundation manufacturing business for floating offshore wind power generation.

The JFE Group has positioned its offshore wind power business as a key initiative. Our strength lies in the diverse range of businesses within the Group, which can collaborate to generate synergies and create new value. We will continue to leverage the Group's comprehensive capabilities to play our role in developing Japan's domestic supply chain for the industry.



JFE Group's booth at the WIND EXPO

The JFE Group participated as a panelist in the NIKKEI Blue Ocean Forum, sponsored by The Nihon Keizai Shimbun and Nikkei BP and held in May and December 2024. We introduced our project using steel slag products to create seaweed beds and our "blue carbon" initiative to calculate the amount of carbon absorbed and fixed by marine life.

In September 2025, JFE Steel took part in Tokyo Bay Festival 2025, an event held in Yokohama City to celebrate the bounty of Tokyo Bay, and presented the company's involvement in the regeneration of the marine environment and contribution to biodiversity through its steel slag products. The event offered a great opportunity for the company to showcase to the many visitors how its products contribute to the SDGs.



JFE Steel's booth at Tokyo Bay Festival 2025

Environment: Executive Summary

The JFE Group strives to maintain its businesses in harmony with the environment for the prosperity of society. We have positioned climate change as a key management concern in our pursuit of becoming the top runner in carbon neutrality technology development by 2035 toward achieving carbon neutrality by 2050. To this end, we are reducing greenhouse gas emissions in the steel business and expanding our contribution to reducing greenhouse gas emissions in society as a whole, centered on the engineering business. We have identified climate change, transition to a circular economy, and biodiversity conservation and nature positive as key issues under our Eighth Medium-term Business Plan (FY2025–FY2027), and the entire Group is working in concert to address global environmental concerns.

The JFE Group systematically addresses climate change by incorporating the principles of international frameworks into its management strategies, including the climate-related disclosure standards of the International Sustainability Standards Board (ISSB). In the steel business, we have created a roadmap for achieving carbon neutrality by 2050 and are working to reduce greenhouse gas (GHG) emissions toward short-, medium-, and long-term targets. GHG emission reductions in the steel business are progressing according to plan, and our efforts toward achieving the Eighth Medium-term Business Plan target of a 24% reduction by FY2027 compared to FY2013 and a reduction of 30% or more by FY2030 include introducing innovative electric arc furnaces and using direct reduced iron. We are also pursuing the parallel development of ultra-innovative technologies, including a carbon-recycling blast furnace, with the aim of establishing these technologies by around 2035. Their implementation, however, depends on their economic viability. Moreover, the shift to steelmaking processes that achieve carbon neutrality entails enormous costs, making it indispensable to create markets for GX products with environmental value and gain support from the government and others. As part of these efforts, we allocate the reductions created by our emission-reduction technologies to selected steel products and supply them as GX Steel "JGreeX™" while promoting their use across a wide range of fields, including automotive, shipbuilding, and industrial machinery. To support investment, we applied for a program of the Ministry of Economy, Trade and Industry and secured support for the introduction of an innovative electric arc furnace at the Kurashiki district of the West Japan Works. In the engineering business, we are working to expand our contributions to reducing GHG emissions in society by constructing renewable energy power generation facilities, including offshore wind power generation. In FY2025, we achieved our target of contributing to a 12.5 million tonne reduction in GHG emissions in society, and we are expanding initiatives for achieving reductions of 20 million tonnes in FY2030 and 30 million tonnes in FY2035.

The transition to a circular economy is also positioned as a key theme, and we are coordinating our steel, engineering, and trading businesses and value chain to expand the use of recycled resources, improve the efficiency of waste resource utilization, and convert waste into resources.

We are promoting initiatives for biodiversity conservation and nature positive, assessing the dependencies and impacts between our business activities and natural capital, and advancing disclosures in line with the TNFD. These efforts mainly include monitoring and conservation activities around production sites and initiatives to improve the marine environment by using steel slag products. In regard to the blast furnace site and other facilities suspended in FY2023 at JFE Steel's East Japan Works (Keihin district), we are focusing on converting the land for public and highly public-interest use, contributing to the sustainable development of local communities and society by establishing new industries and creating jobs for the next 100 years.

Targets and Results for Environment-Related Material Issues of Corporate Management

› **FY2025 KPI Results and FY2026 KPIs** (P. 19)

Key Initiatives

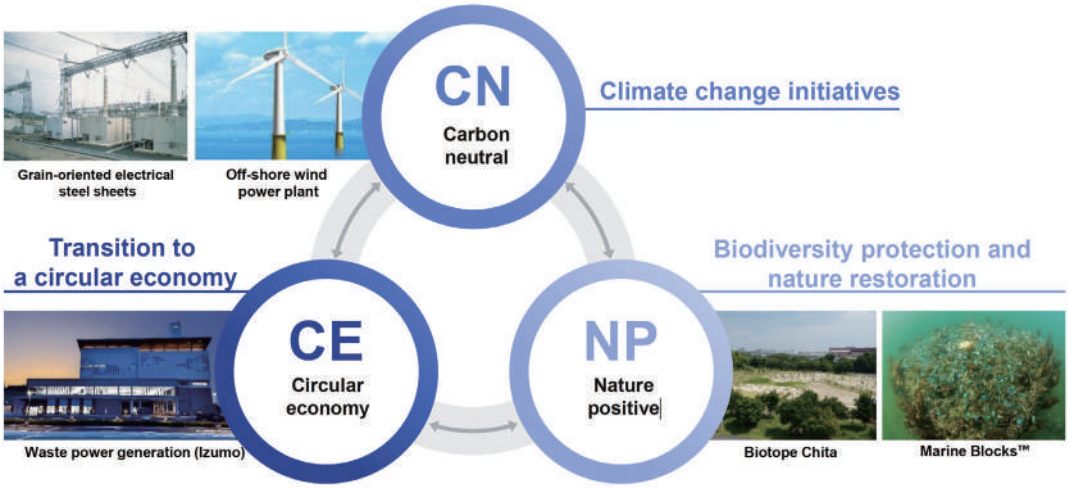
- Environmental Management Initiatives (P. 45)
- Initiatives to Address Climate Change (P. 49)
- Policy Engagement Initiatives (P. 89)
- Identification and Assessment of Risks and Opportunities (TCFD Scenario Analysis) (P. 113)
- Initiatives to Transition to a Circular Economy (P. 126)
- Biodiversity Conservation and Nature Positive (P. 154)
- Environmental Management Activities (P. 180)

Environmental Management

Basic Policy

JFE Group companies are developing innovative technologies and international cooperation for the protection of the global environment by operating in harmony with the global environment, as well as protecting it, in accordance with the Group's environmental philosophy and policy.

Under the Eighth Medium-term Business Plan, we have positioned initiatives to address climate change, transitioning to a circular economy, and biodiversity conservation and nature positive as key issues. Since these issues are interconnected, we will address them in an integrated manner, taking into account both trade-offs and synergies. The JFE Group also views environmental issues as key management concerns that lead to new value creation and opportunities for sustainable growth beyond reducing risks. We aim to simultaneously resolve social issues and enhance corporate value by providing products and services that help reduce environmental impact, developing markets for products with environmental value, including GX steel, and expanding the use of circular resources. In advancing these initiatives, we will make appropriate investment decisions with emphasis on ensuring capital efficiency and economic viability based on the business environment and technological trends. At the same time, we will strive to provide highly transparent disclosure of environmental information and strengthen relationships of trust through constructive dialogue with stakeholders.



Based on the Ministry of the Environment's "State of the Environment, the Economy, and Society and Direction of Environmental Policies" (January 2023)

Environmental Philosophy

The JFE Group puts top priority on protecting and enhancing the global environment to maintain its business in harmony with the environment and ultimately for the prosperity of society as a whole.

Environmental Strategies

1. Reduce the environmental impact of all businesses
2. Contribute through technologies and products
3. Contribute through businesses for resource conservation and energy efficiency
4. Communicate with society
5. Facilitate international cooperation

Policy on Environment-related Information Disclosure

Environment-related risks and opportunities may have a significant impact on corporate finances and business activities over the medium to long term. The JFE Group has worked to enhance disclosure on environmental issues, including climate change, by disclosing climate-related information based on the TCFD recommendations and endorsing the recommendations of the Taskforce on Nature-related Financial Disclosures (TNFD). Through disclosure aligned with these international disclosure frameworks, the Group seeks to enhance the transparency and reliability of its initiatives for stakeholders, including investors, customers, employees, and local communities.

In addition, the International Sustainability Standards Board (ISSB), established by the IFRS Foundation*, has built on the work of the TCFD and developed international standards for sustainability-related financial disclosures. In Japan, the Sustainability Standards Board of Japan (SSBJ) has formulated disclosure standards based on the ISSB standards, which were published in March 2025. The JFE Group is preparing to apply the standards from the fiscal year ending March 2028. Going forward, the JFE Group will continue to enhance its environment-related disclosure while ensuring alignment with international disclosure standards.

*A private, non-profit organization responsible for developing International Financial Reporting Standards (IFRS)

In May 2019, JFE Holdings announced its endorsement of the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), and in March 2025, it announced its endorsement of the recommendations of the Taskforce on Nature-related Financial Disclosures (TNFD).

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

TNFD Taskforce on Nature-related Financial Disclosures

For the TCFD Content Index, please refer to the following.

› **Guidelines Content Index** (P. 310)

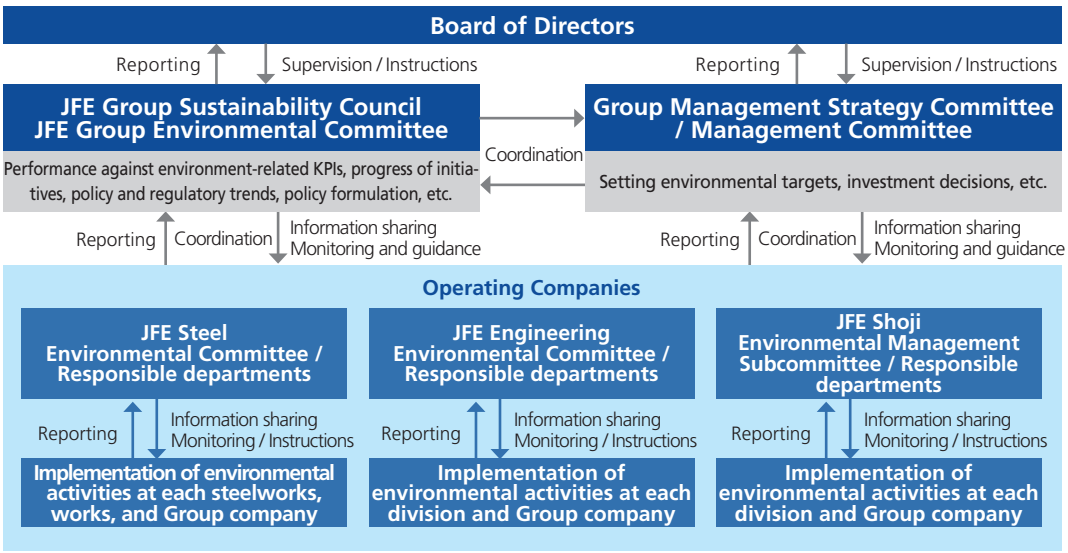
Governance

The JFE Group Environmental Committee, chaired by the president of JFE Holdings and operating under the JFE Group Sustainability Council, advances the Group's response to environmental issues. The Group Management Strategy Committee and Management Committee serve as forums for discussing and deliberating material environmental issues from a strategic perspective and, as appropriate, set targets for environmental issues, including climate change, and make decisions on environment-related investments. The JFE Group Environmental Committee serves as a forum for sharing and managing information on performance against environmental KPIs, progress on initiatives, policy trends in Japan and overseas, and changes in the business environment. It meets twice a year to improve the Group's overall environmental performance and strengthen its response to environmental issues. These matters are reported to the Board of Directors at least twice a year, and the Board fulfills its supervisory function through these discussions.

Furthermore, each JFE Group operating company and other Group company has also established specialized environmental committees and promotes environmental management activities tailored to their business characteristics, thus creating an integrated Groupwide environmental management framework.

For further details, please refer to:
- **System for Promoting Sustainability** (P. 10)
- **Progress under JFE Vision 2035 and the Eighth Medium-term Business Plan** (P. 24)
- **JFE Group Environmental Vision for 2050** (P. 49)

Environment-related Governance Structure



Examples of Environmental Items Reported to or Decided by the Board of Directors

- Reports on KPI targets and performance for material items (environment)
- Information disclosure consistent with TCFD recommendations (scenario analysis, financial impact, and other information)
- Formulation of the JFE Group Environmental Vision for 2050
- Use of climate-related metrics to determine executive remuneration
- Formulation of GHG emissions reduction targets and contribution targets under the Eighth Medium-term Business Plan
- Decision-making on capital investment for GHG emissions reduction (including the introduction of innovative electric arc furnaces)
- Status of initiatives to prepare for the SSBJ standards
- Status of initiatives for environment-related disclosure through CDP and other channels
- Status of initiatives for the transition to a circular economy, biodiversity conservation, and nature positive

Risk Management

JFE Holdings is responsible for comprehensive risk management in accordance with its Basic Policy for Building Internal Control Systems.

Environment-related risks and opportunities are identified, assessed, and reviewed on an ongoing basis at the corporate level, using methods such as scenario analysis for material issues, including climate change. The results of these analyses are appropriately reported in accordance with the aforementioned governance framework. Key factors affecting business are selected, and detailed analysis of their impacts is used in formulating business strategies, including medium-term business plans.

In addition, each operating company works to identify and reduce risks through environmental management systems, routine environmental management activities, and training. This information is compiled by JFE Holdings, thereby establishing an integrated environmental risk management framework across the JFE Group.

› **Environmental Management Activities** (P. 180)

Monitoring Method for Risks

The JFE Group continuously monitors environment-related risks and opportunities through the JFE Group Environmental Committee, Group Management Strategy Committee, and Management Committee. Monitoring methods include scenario analysis, progress management for various KPIs, and tracking changes in the business environment and regulatory trends to periodically assess changes in risks and opportunities. These monitoring results are used to review response policies and measures as necessary to reduce risks and maximize opportunities. Particularly important matters are promptly reported to management under the governance framework and reflected in management decisions. In addition, the JFE Group Environmental Committee consolidates information related to risks, strengthens management systems, and strives to reduce the frequency and impact of risks. Moreover, the JFE Group promotes initiatives to maximize climate-related opportunities. These initiatives are reported to and overseen by the Board of Directors at least twice a year.

Each operating company also continuously implements improvement measures for issues identified through environmental management activities and verifies their effectiveness, thereby strengthening its ability to address environmental risks.

Countermeasures Based on Monitoring

1. Groupwide deliberations
2. Monitoring penetration of policies within the Group
3. Information sharing and horizontal communication regarding responses to issues and problems

› **System for Promoting Sustainability** (P. 10)
› **Risk Management** (P. 269)
› **Environmental Management Activities** (P. 180)

Initiatives to Address Climate Change

Basic Policy

Climate change is a critical business concern for the JFE Group that is directly linked to business continuity and the enhancement of corporate value over the medium to long term. Our steel business, which emits at least 99% of the Group's total greenhouse gas (GHG) emissions, has been developing various technologies for saving energy and reducing these emissions. We have applied these technologies to steel manufacturing processes to enable production with low levels of GHG emission intensity.

Furthermore, the JFE Group has developed and maintains a variety of products and technologies that contribute to reducing GHG emissions, including high-performance steel materials that save energy when customers use them, as well as renewable energy power generation. We will continue to develop and promote the widespread use of these processes and products. We consider this an opportunity to apply the technologies we have fostered across the globe and at the same time contribute to tackling climate change.

Following its endorsement of the TCFD recommendations, the JFE Group has used scenario analysis to identify climate-related risks and opportunities and to formulate strategies based on them. Building on these efforts, we now incorporate our response to climate change in our management strategies while seeking to align our efforts with international frameworks, including the ISSB climate-related disclosure standards.

Furthermore, aiming to be a leader in the development of carbon-neutral technologies, the JFE Group has formulated the JFE Group Environmental Vision for 2050, with the goal of achieving carbon neutrality by 2050. We will actively work to reduce GHG emissions and contribute to GHG reductions.

At the same time, the business environment surrounding climate change remains highly uncertain. In executing investments related to Green Transformation (GX), we will make and implement decisions after comprehensively taking into account the development status of individual technologies, the availability of energy infrastructure such as electricity and hydrogen, the maturity of markets for GX products, and trends in government support measures and system design, after carefully assessing economic rationality.

JFE Group Environmental Vision for 2050

The JFE Group intends to strengthen sustainability through solutions that address global climate change issues while restructuring its business in response to changes in the environment surrounding the steel business.

In 2021, we formulated the JFE Group Environmental Vision for 2050 toward achieving carbon neutrality by that year.

Under this vision, we will systematically address climate change, building on our climate-related efforts in line with the TCFD recommendations and aligning our approach with international climate-related disclosure frameworks. In the steel business, we set a target of reducing GHG emissions by 18% from FY2013 levels by the end of FY2024. In addition, we have announced targets for our steel business of reducing GHG emissions by FY2027 by 24% and by FY2030 by 30% or more, compared to FY2013. In FY2024, we achieved a 23% reduction, exceeding our initial target.

To explore all possibilities for realizing carbon neutrality in 2050, we will take on the challenge of developing ultra-innovative technologies such as carbon-recycling blast furnaces developed with our proprietary technology while also adopting a multitrack approach for pursuing other technologies. In our engineering business, we will widen our contribution to the reduction of GHG in society as a whole by expanding and advancing renewable power generation and carbon-recycling technologies. In our steel business, we contribute by supplying high-performance steel products and through other initiatives. Furthermore, we will apply Group strengths to accelerate the commercialization of our offshore wind-power business.

The development of process technologies that minimize GHG emissions while enabling the mass production of high-quality, high-performance steel products is essential for the sustainable development of society. Efforts for achieving carbon neutrality will inevitably entail substantial costs for research and development and renewed facilities. We believe it will be necessary to consider how society will bear these costs and what support can be provided by the government and other sources.

Given the ambitious target of achieving carbon neutrality by 2050, we hope to lead the way in establishing the necessary decarbonization technologies at the earliest possible stage, based on developing a decarbonization infrastructure and realizing a global equal footing.

JFE Group Environmental Vision for 2050

- **Climate change is a critical business concern for JFE, and we are aiming to achieve carbon neutrality by 2050.**
- **We will accelerate our research and development of new technologies and pursue ultra-innovative technologies.**
- **We will seek business opportunities that allow us to enhance corporate value by contributing to GHG emissions reduction across society**
- **The principles of TCFD will be reflected in our business strategies and systematically deployed.**

Target of Reducing GHG Emissions in FY2027 (Eighth Medium-term Business Plan Initiatives)
- Reduce steel-business GHG emissions in FY2027 by 24%, compared to FY2013 (steel business)

Target of Reducing GHG Emissions in FY2030
- Reduce steel-business GHG emissions in FY2030 by 30% or more, compared to FY2013 (steel business)

Initiatives for Carbon Neutrality by 2050

❶ Reduce steel-business GHG emissions
- Pursue ultra-innovative technology for carbon-recycling blast furnaces and CCU
- Develop hydrogen-based ironmaking direct reduction technology
- Leverage top-class electric arc furnace technology for high-quality, high-performance steel manufacturing and for high efficiency, ensure early implementation, etc.
- Develop transitional technologies for carbon neutrality, including increased use of steel scrap in converters, energy savings, and low-carbon energy transformations

❷ Expand contributions to GHG emissions reduction in society
- Engineering business: Expand and develop renewable energy power generation and carbon-recycling technologies (targets for contributing to GHG emissions reductions of 13.5 million tonnes in FY2027, 20 million tonnes in FY2030, and 30 million tonnes in FY2035)
- Steel business: Develop and market eco-products and eco-solutions
- Trading business: Increase trading in biomass fuels, steel scrap, etc., and strengthen business in supply chain management for eco-products

❸ Offshore wind-power generation business (Groupwide effort to accelerate commercialization of the offshore wind-power business)
- Engineering business: Manufacture monopiles and other seabed-fixed structures for offshore wind-power generation
- Steel business: Produce large, heavy plates using the No. 7 continuous casting machine in the Kurashiki district of the West Japan Works
- Trading business: Carry out supply chain management for steel materials and processed products.
- Shipbuilding business: Manufacture offshore wind power generation floating structures and construct work vessels
- Groupwide: Operation and maintenance (O&M) making maximum use of Group resources

Notes:
1. Carbon-recycling blast furnace: A technology that converts CO_2 from the blast furnace into methane, which is then used as reducing material in the blast furnace
2. CCU: Carbon dioxide capture and utilization
3. Transitional technologies: Technologies that advance the transition to carbon neutrality

› **Progress under JFE Vision 2035 and the Eighth Medium-term Business Plan** (P. 24)
› **JFE Group Environmental Vision for 2050, Presentation Material** (https://www.jfe-holdings.co.jp/en/common/pdf/investor/climate/2021-210525-release01.pdf)
› **JFE Group Environmental Management Strategy, Presentation Material**
(https://www.jfe-holdings.co.jp/en/common/pdf/investor/climate/environmental-management-strategy250529-01.pdf)

JFE Group's Strategy for Addressing Climate Change Issues

The JFE Group organizes climate change-related risks and opportunities and reflects them in its management strategies. In the Eighth Medium-term Business Plan (FY2025–FY2027), the Group positions this as a key management issue and is pursuing related initiatives. In addition, based on the JFE Group Environmental Vision for 2050 toward achieving carbon neutrality by 2050 and JFE Vision 2035, we have incorporated initiatives aimed at becoming a leader in carbon-neutral technology development into our business strategies. These strategies are formulated in light of the risks and opportunities identified through impact assessments based on scenario analysis and are also used for decision-making. Furthermore, we communicate our climate change initiatives through various disclosure channels and briefings to further strengthen relationships of trust with our stakeholders.

For related materials, please refer to:

› **Identification and Assessment of Risks and Opportunities (TCFD Scenario Analysis)** (P. 113)

› **JFE Group Environmental Vision for 2050, Presentation Material**
(https://www.jfe-holdings.co.jp/en/common/pdf/investor/climate/environmental-management-strategy250529-01.pdf)

› **JFE Group Long-term Vision "JFE Vision 2035," Eighth Medium-term Business Plan (FY2025–FY2027)**
(https://www.jfe-holdings.co.jp/uploads/2024-chuuki250508-01e.pdf)

› **JFE Group Environmental Management Strategy, Presentation**
(https://www.jfe-holdings.co.jp/en/common/pdf/investor/climate/environmental-management-strategy250529-01.pdf)

Initiatives for Achieving Carbon Neutrality in the Steel Business

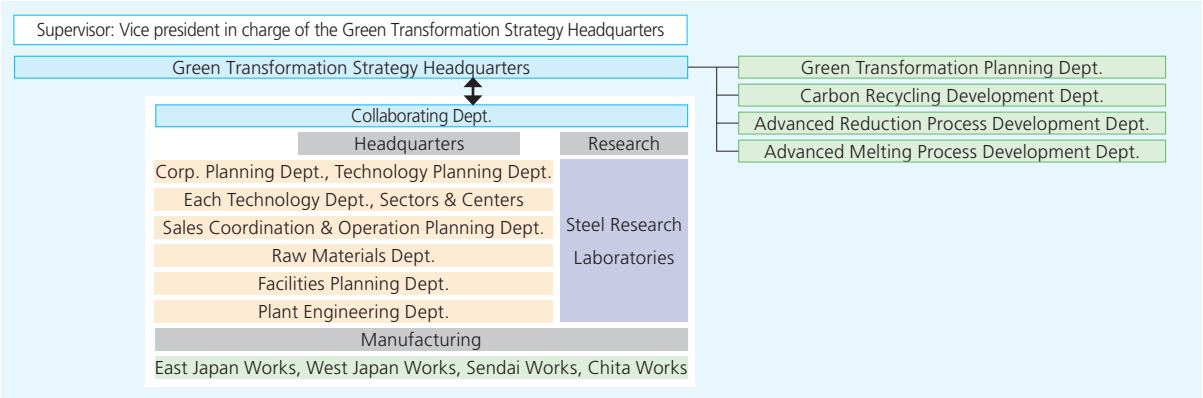
Promotion Structure

At JFE Steel, the Green Transformation Strategy Headquarters was established to formulate and promote a Companywide strategy to realize GX. The office is comprised of the Green Transformation Planning Department*[1] and departments responsible for developing technologies, specifically the Carbon Recycling Development Department, the Advanced Reduction Process Development Department, and the Advanced Melting Process Development Department. The Green Transformation Strategy Headquarters steers various GX-related initiatives, and important decisions are deliberated on and made by the Group Management Strategy Committee and the Board of Directors. Under this structure, JFE Steel will conduct and manage carbon-neutral technology development and investment as well as address issues such as market development for expanding sales of GX steel JGreeX™*[2] and strengthening cooperation with government authorities.

*1 In April 2026, the Green Energy Infrastructures Development Department was merged into the Green Transformation Planning Department, consolidating responsibility for external collaboration with government authorities and companies in industrial complexes to support a more integrated implementation of the GX strategy.

› ***2 Initiatives to Develop the GX Steel Market through GX Steel, JGreeX™** (P. 60)

JFE Steel's Management Structure to Promote Carbon Neutrality



Approach to Balancing Environmental Initiatives and Economic Rationality in the Steel Business

The market for GX steel*[1] (green steel) has potential demand of approximately 500 million tonnes by 2050,*[2] and demand-side needs for GX products are expected to grow in the future. The Japanese government has also set a target of capturing a domestic and international market for high-quality GX steel of approximately 3 million tonnes or more per year for automobiles, construction, public works, shipbuilding, industrial machinery, and other applications in the early 2030s.*[2] Competitors in Japan and overseas are also pursuing technological development and investment for producing GX steel.

In this context, JFE Steel is pursuing the development of ultra-innovative technologies, including carbon-recycling blast furnaces, hydrogen-based direct reduction, and highly efficient, large-scale electric arc furnaces by utilizing the Green Innovation Fund Project with the aim of leading the way in achieving carbon neutrality in the steel industry. We believe the use of electric arc furnaces is the only available means during the transition phase. We will strengthen collaboration with the government to secure CAPEX support and tax incentives so that we can quickly convert to the innovative electric arc furnace process. In April 2025, after securing a subsidy under the government's Energy and Manufacturing Process Conversion Support Program for Industries in a Hard-to-Abate Sector, we formally decided, ahead of other companies, to introduce an innovative, highly efficient, large-scale electric arc furnace to replace the No. 2 blast furnace at the West Japan Works (Kurashiki district), scheduled for refurbishment in FY2027. In the field of electric arc furnace steel as well, enhancing the technological capabilities underpinning our competitiveness, including process technologies and product and composition patents, and supplying high-quality, high-performance steel products that were difficult to manufacture with existing electric arc furnaces, are essential for maintaining and enhancing our standing as a world-leading steel company. JFE Steel aims to build a domestic production and a technology base for low-carbon, high-quality, high-performance steel products and to secure the top share in the domestic GX steel market.

On the other hand, demand for GX steel is still at an early stage. To ensure the predictability of recovering GX investments, JFE Steel will propose and help implement public-private measures to create a GX steel market, such as the visualization of environmental value as well as preferential procurement and purchase support.

› ***1 Initiatives to Develop the GX Steel Market through GX Steel, JGreeX™** (P. 60)

› ***2 Public-Private Investment Roadmap for "Key Products and Technologies" in 17 Strategic Fields (Japanese only)**
(https://www.cas.go.jp/jp/seisaku/nipponseichosenryaku/pdf/rm2026.pdf)

Steel Business Initiatives for Achieving GHG Emissions Reduction Targets

The JFE Group has adopted a multi-pronged approach to achieve carbon neutrality by 2050, including the development of ultra-innovative technologies. We have set a target in the steel business for reducing GHG emissions by 24% by FY2027 and by at least 30% by FY2030, compared to FY2013. We regard the period through 2030 as a transition phase, during which we will steadfastly implement plans to achieve our GHG reduction targets, mainly by expanding the application of low-carbon technologies focused on "reducing," while accelerating research and development of ultra-innovative technologies in preparation for the innovation phase after 2030. In the innovation phase, we will advance initiatives for the wise use of resources, including the commercialization of carbon-recycling blast furnaces that leverage our proprietary carbon-recycling technology and direct reduction steelmaking, as well as the expansion of CCU applications. Furthermore, we will undertake CO_2 sequestration through CCS to create a carbon-neutral society together with local communities and industrial complexes. We will achieve carbon neutrality through initiatives under these three themes.

Roadmap to Carbon Neutrality

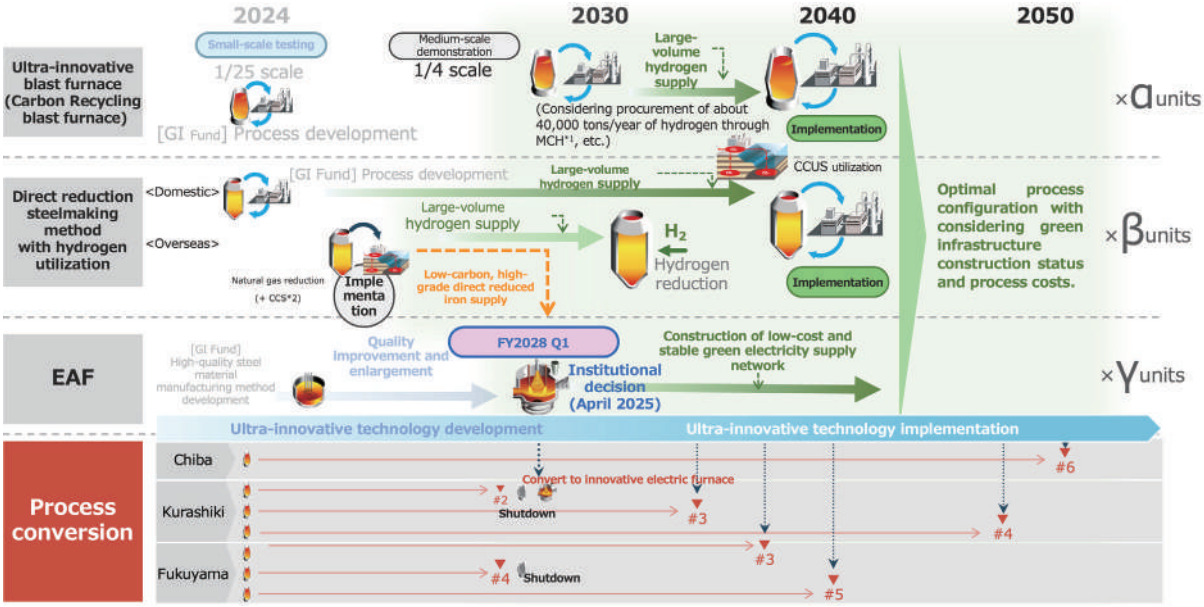
In May 2025, the JFE Group formulated the Eighth Medium-term Business Plan (FY2025–FY2027) to drive growth strategies and announced its GHG reduction plan through FY2030 at the JFE Group Environmental Management Strategy Briefing held that same month. In the steel business, we have set a new target of a 24% reduction by FY2027 as an interim milestone on a linear path toward a reduction of at least 30% by FY2030 (both compared to FY2013). Furthermore, we formulated our long-term vision, JFE Vision 2035, expressing our aspirations for the future. JFE Vision 2035 incorporates into our business strategies the policy of becoming a leader in carbon-neutral technology development, and we are advancing phased and strategic initiatives to achieve carbon neutrality in our steel business by 2050.

Major GX investments expected to contribute significantly to achieving the FY2030 target, such as the Kurashiki innovative electric arc furnace and investments in the use of direct-reduced iron in a blast furnace, have for the most part already been formally approved. Meanwhile, toward achieving carbon neutrality by 2050, we are working on research and development of

innovative low-carbon technologies while utilizing public support such as the Green Innovation Fund. Targeted for completion around 2035, these efforts are intended to establish ultra-innovative technologies, such as the use of hydrogen in carbon-recycling blast furnaces and direct reduction, as well as methods for producing high-quality, high-performance products using electric arc furnaces, which fundamentally reimagine conventional manufacturing processes.

The state of energy infrastructure will be a crucial factor in addition to progress in the development of ultra-innovative technologies for achieving carbon neutrality. Just as essential will be our response to external changes, such as the development of hydrogen supply networks and securing a stable supply of decarbonized electric power. Furthermore, market demand for GX steel and the rising environmental awareness of customers will also be key indicators for decisions on the transformation of the steelmaking process. We will pursue this transformation at the optimal time by comprehensively taking these factors into account.

Roadmap to Carbon Neutrality in 2050



*1 MCH (Methyl Cyclol Hexane) A type of hydrogen carrier, a liquid made by adding hydrogen to toluene

*2 CCS (Carbon dioxide Capture and Storage)

› Source: May 29, 2025 JFE Group Environmental Management Strategy Presentation Materials
(https://www.jfe-holdings.co.jp/en/common/pdf/investor/climate/environmental-management-strategy250529-01.pdf)

JFE Group's Strategy and Alignment with the Paris Agreement

The Technology Roadmap for Transition Finance in the Iron and Steel Sector, published by the Japanese Ministry of Economy, Trade, and Industry (METI), is consistent with Japan's emissions reduction targets based on and therefore aligned with the Paris Agreement. The roadmap sets out a pathway to achieve carbon neutrality by accelerating decarbonization through the introduction of innovative technologies starting in the 2040s, assuming the development of a hydrogen supply infrastructure and CCUS.

In 2022, the JFE Group issued transition bonds through a public offering. During the evaluation process for this issuance, a third party certified that the Group's initiatives aligned with METI's roadmap. The Group therefore considers its initiatives to be aligned with the Paris Agreement.

› METI: Technology Roadmap for Transition Finance in the Iron and Steel Sector (Japanese only)
(https://www.meti.go.jp/policy/energy_environment/global_warming/transition/transition_roadmap2025_ironandsteel_j.pdf)

› METI: Transition Finance Case Study (https://www.meti.go.jp/policy/energy_environment/global_warming/transition/transition_finance_case_study_jfehd_eng.pdf)

Metrics and Targets (Plans and Results for GHG Emissions Reduction in the Steel Business)

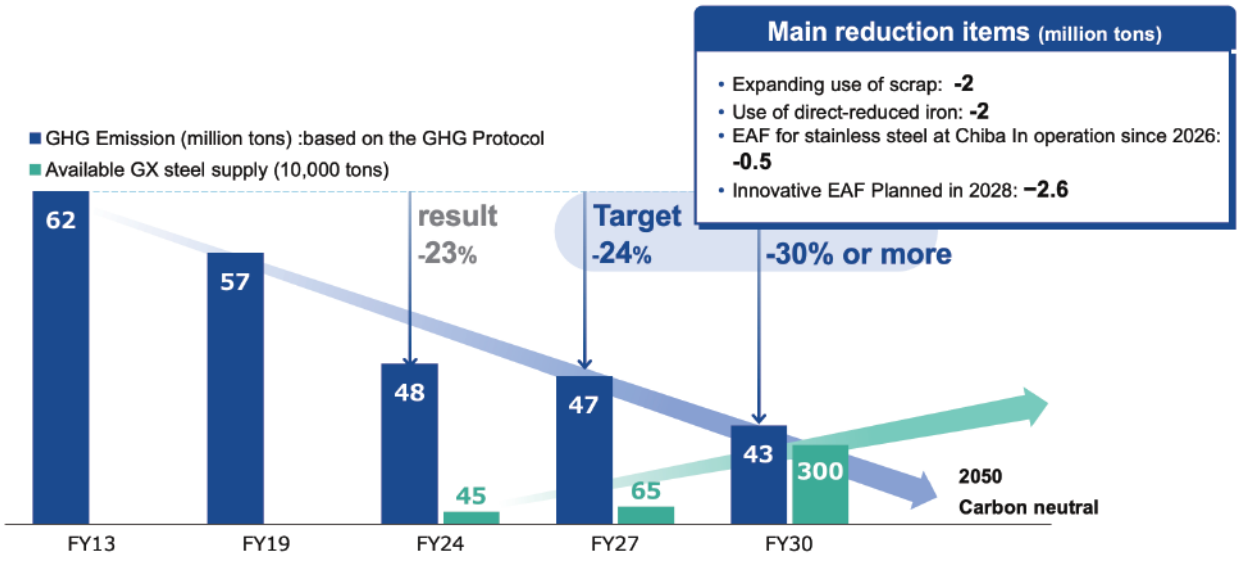
GHG Emissions Reduction in the Domestic Steel Business

The JFE Group has set a target in the steel business for reducing GHG emissions by 24% by FY2027 and by at least 30% by FY2030, compared to FY2013. To achieve these goals, JFE Steel began constructing an innovative electric arc furnace in the Kurashiki district of the West Japan Works in October 2025, scheduled to start operating in FY2028. Once this innovative electric arc furnace is operational, we will build a system for the mass supply of GX steel, JGreeX™* and steadily reduce GHG emissions. In addition, in April 2026 we started operating an electric arc furnace for stainless steel production in the Chiba district of the East Japan Works. By uniting all Group companies in Japan and overseas to incorporate efforts to address climate change into our business strategies, the Group will systematically reduce GHG emissions by reflecting the TCFD's principles in its management strategies.

In addition to reducing GHG emissions, JFE Steel has also set a target of expanding the supply capacity of JGreeX™ to 3 million tonnes per year to contribute to the decarbonization of society as a whole.

› *Initiatives to Develop the GX Steel Market through GX steel, JGreeX™ (P. 60)

Domestic Steel Business: GHG Emissions Reduction Plan



Alignment with the Japan Iron and Steel Federation's Plan

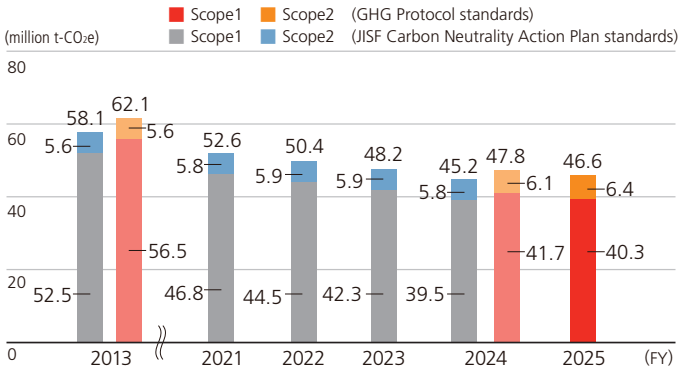
As a member of the Japan Iron and Steel Federation (JISF), JFE Steel is working to achieve the targets of the federation's Carbon Neutrality Action Plan. This plan sets a target of a 30% reduction in energy-derived CO_2 emissions in FY2030, compared to FY2013, and JFE Steel is aggressively pursuing this goal.

In addition, JISF formulated and announced the Long-term Vision for Climate Change Mitigation, which looks ahead to 2030 and beyond, in 2018, which is intended to realize zero-carbon steel. JFE Steel played a key role in formulating this vision. Furthermore, in 2021, the JISF announced the Basic Policy of the Japan Steel Industry on 2050 Carbon Neutrality, sought by the Japanese government, declaring that the Japanese iron and steel industry will boldly take on the challenge of realizing zero-carbon steel.

The JFE Group has declared its intention to reduce GHG emissions in the steel business by at least 30% in FY2030, compared to FY2013, and to achieve carbon neutrality by 2050.

Domestic Steel Business: Actual GHG Emissions

JFE Steel's GHG Emissions Trends

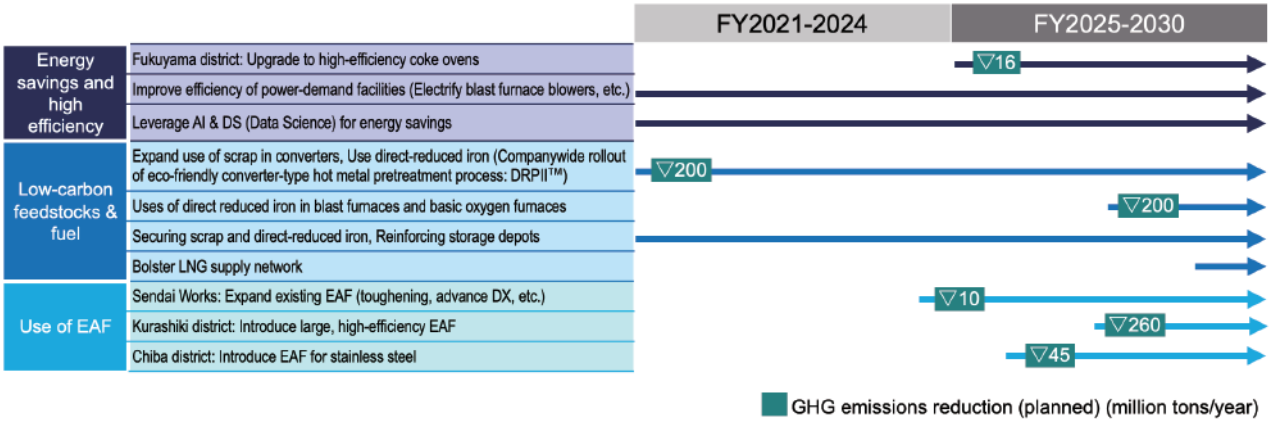


Note: For FY2021–FY2024, CO_2 emissions are calculated in accordance with the JISF Carbon Neutrality Action Plan standards. From FY2024 onward, emissions are calculated in accordance with the GHG Protocol standards.

For quantitative data for the JFE Group's GHG emissions, please refer to:
› **Environmental Data** (P. 273)

Initiatives for Achieving the FY2030 GHG Emissions Reduction Target

To achieve the steel business target of reducing GHG emissions by at least 30% from FY2013 levels by FY2030, we have defined the period up to 2030 as a transition phase and are pursuing initiatives based on three pillars: energy saving and higher efficiency, use of low-carbon raw materials and fuels, and the application of electric arc furnace technology. By FY2024, we had authorized investments of approximately 0.4 trillion yen for reducing GHG emissions, which we were implementing. Major investment projects that will contribute to achieving the FY2030 reduction target, such as the innovative electric arc furnace project in the Kurashiki district of the West Japan Works and the expanded use of direct-reduced iron and scrap in the Chiba district of the East Japan Works, have for the most part already been formally approved. In addition, under the Eighth Medium-term Business Plan, we are steadily executing GHG reduction investments to achieve the reduction targets for FY2027 and FY2030 through the cumulative effects of each initiative. We will continue to authorize and execute the necessary financing and investments while developing and deploying ultra-innovative technologies to achieve carbon neutrality by 2050.



Initiatives in Existing Processes

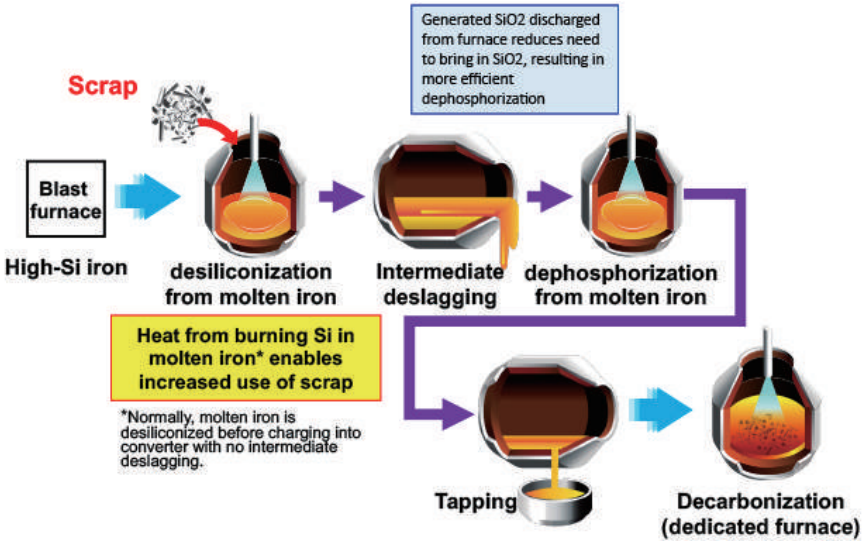
Increased Use of Scrap Iron in Steelmaking

JFE Steel introduced the Double-slag Refining Process (DRP™), an eco-friendly converter-type molten-iron pretreatment process, at all of its sites in 2021, thereby increasing the amount of scrap iron to be used in converters and reducing GHG emissions.

DRP makes full use of silicon in molten iron as a heat source, thereby increasing the amount of scrap iron to be used in converters. It allows for the reduction of the molten-iron blending ratio (molten iron vs. scrap charged into the converter) to 82%, down from 90% through conventional methods.

The Company introduced this process in all of its steelmaking facilities, and the increased use of scrap iron in converters enabled us to reduce annual GHG emissions by approximately 1.34 million tonnes in FY2024. We will continue to develop technologies to further expand the use of scrap.

Eco-Friendly Converter-Type Molten Iron Pretreatment Process DRP™: Double-Slag Refining Process



Use of HBI in Blast Furnaces

JFE Steel is expanding the use of direct-reduced iron in the form of hot briquetted iron (HBI) in blast furnaces. Direct-reduced iron is an iron source produced by removing part of the oxygen from iron ore in advance. It contributes to reducing coke consumption and CO_2 emissions by reducing the need for reduction reactions inside the blast furnace. JFE Steel formally approved a GX investment of approximately 6 billion yen to utilize direct-reduced iron in the No. 6 blast furnace in the Chiba district of the East Japan Works, with support from the FY2024 Subsidy for the Energy Conservation Investment Promotion and Demand Structure Transformation Support Project. We are continuing to promote the Middle East direct-reduced iron project while developing and implementing technologies for its use in blast furnaces, mainly in the Chiba district of the East Japan Works. Using direct-reduced iron while maintaining the blast furnace process's strength in producing high-quality steel products will reduce GHG emissions by making effective use of existing facilities and contribute to achieving our emission reduction targets.

Electric Arc Furnace Process Technology Development

JFE Steel is developing and implementing innovative electric arc furnace process technology. The electric arc furnace process uses steel scrap and direct-reduced iron as its main raw materials to manufacture steel products, and can substantially reduce CO_2 emissions compared to the blast furnace-converter method. Further reductions in GHG emissions are expected through the expanded use of hydrogen-reduced iron and decarbonized electricity.

However, the performance of conventional electric arc furnace processes in manufacturing high-quality, high-performance steel products has been constrained due to the effects of impurities derived from scrap, known as tramp elements, and productivity challenges. We have been developing high-quality, highly efficient melting technologies and technologies to mitigate the effects of impurities through development efforts using a pilot electric arc furnace under the Green Innovation Fund Project and at our research laboratories. In 2025, we completed verification of the elemental technologies using the pilot electric arc furnace in the Chiba district and identified a clear path toward establishing the technologies required to

manufacture high-quality steel products. We have now moved on to the engineering stage for implementation of the innovative electric arc furnace.

Building on these achievements, JFE Steel is advancing an innovative electric arc furnace project in the Kurashiki district of the West Japan Works. This project will introduce a highly efficient, large-scale electric arc furnace with an annual capacity of about two million tonnes of steel. Combining our proprietary technologies with innovative process technologies will enable the mass production of high-quality, high-performance steel products such as electrical steel sheets and high-tensile steel sheets, which have been difficult to manufacture with conventional electric arc furnaces. The furnace will also use up to 50% direct-reduced iron and is expected to reduce CO_2 emissions by approximately 2.6 million tonnes per year.

The innovative electric arc furnace in the Kurashiki district is being constructed as a core project for achieving the FY2030 GHG emissions reduction target. In addition to the furnace itself, the project includes related infrastructure, including energy supply facilities for electricity, LNG, and other sources required for the process conversion and port facilities to accommodate the expanded use of direct-reduced iron and scrap. We are making steady progress on the detailed planning and engineering to bring the furnace into operation. Going forward, we will strive to become a main player in the high-quality GX steel market by establishing a stable supply system for high-quality GX steel while substantially reducing CO_2 emissions.

Expansion of Electric Arc Furnace Production Capacity at the Sendai Works

JFE Steel increased electric arc furnace production capacity at the Sendai Works by approximately 140,000 tonnes per year in FY2024 by reinforcing the furnace, applying DX and other measures, and expanding cargo handling capacity. This is expected to result in a reduction of about 0.10 million tonnes of GHG emissions per year.

Operation of the Electric Arc Furnace for Stainless Steel Production at the East Japan Works, Chiba District

JFE Steel began operating a new electric arc furnace at the No. 4 steelmaking shop at the East Japan Works (Chiba district) in April 2026. The shop produces stainless steel, mainly using molten iron from blast furnaces and scrap generated in-house as raw materials. The introduction of the new electric arc furnace has established a system that uses scrap more effectively. The electric arc furnace allows the facility to replace some of the molten iron from blast furnaces with scrap, thereby reducing CO_2 emissions in the steelmaking process. Scrap melting capacity is now up to approximately six times the previous level, and we expect to reduce GHG emissions by a maximum of about 450,000 tonnes per year. Furthermore, we are promoting resource circulation and strengthening business competitiveness by adjusting the raw material mix through greater use of scrap and improving operational efficiency.

Equipment Overview

Capital investment	Approx. 18 billion yen
Start of operation	April 29, 2026
Scrap melting capacity	Approx. 300 kilotonnes/year
GHG emissions reduction effect	Up to approx. 450 kilotonnes/year



Exterior of the electric arc furnace at the No. 4 steelmaking shop in the Chiba district

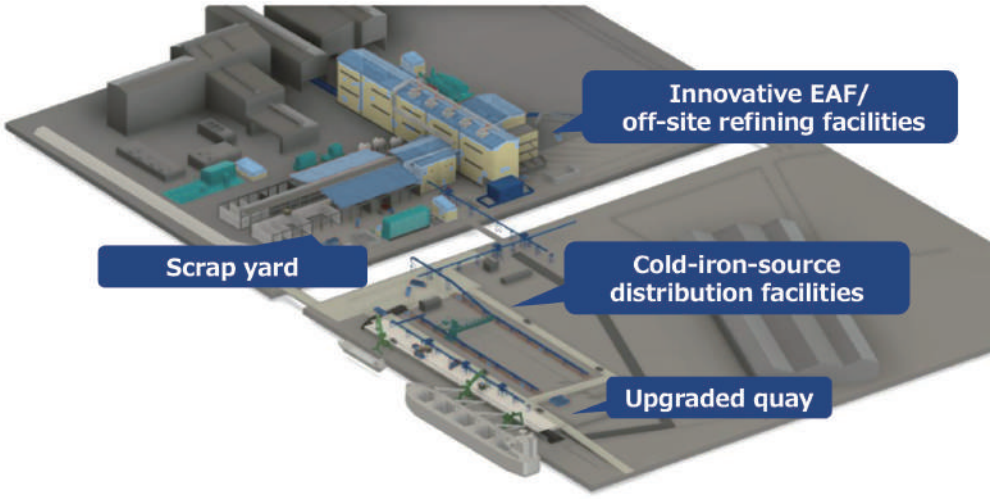
Introduction of an Innovative Electric Arc Furnace at the West Japan Works, Kurashiki District

In April 2025, JFE Steel formally decided to convert the No. 2 blast furnace at the West Japan Works (Kurashiki district), scheduled for refurbishment in FY2027, into an innovative electric arc furnace. We then proceeded with the removal of existing facilities and started foundation pile-driving work in late October 2025. This innovative electric arc furnace will be one of the largest in the world. With it, we aim to establish, ahead of our competitors, a mass supply system for high-quality, high-performance steel products that cannot be produced using conventional large-scale electric arc furnaces, and secure the top share in the domestic GX steel market. This project will convert part of the blast furnace process to the electric arc furnace process and is positioned as a core project among the GHG reduction investments authorized through FY2024. The innovative electric arc furnace is world-class equipment that combines a high-efficiency, large-scale electric arc furnace with our proprietary technologies for manufacturing high-quality steel. It will enable the mass supply of high-quality, high-performance steel products such as electrical steel sheets and high-tensile steel sheets, which are difficult to manufacture with conventional electric arc furnaces.

The innovative electric arc furnace will have an annual capacity of about two million tonnes of steel and is planned to use up to 50% direct-reduced iron. It will produce high-quality steel products and reduce CO_2 emissions through an integrated electric arc furnace process using scrap and direct-reduced iron and is expected to reduce GHG emissions by approximately 2.6 million tonnes per year.

We are also formulating plans for this project on the basis of government support. In addition to constructing the furnace itself, we are also developing related infrastructure, such as energy supply facilities for electricity, LNG, and other sources and port facilities to accommodate the expanded use of direct-reduced iron and scrap. Going forward, we aim to become a major player in the high-quality GX steel market by building a stable supply system for high-quality GX steel and substantially reducing GHG emissions.

Conceptual image of the innovative electric arc furnace and related facilities in the Kurashiki district



Equipment Overview

Investment scale	329.4 billion yen (with government support capped at 104.5 billion yen)
Investment details	Innovative electric arc furnace, secondary refining equipment, cold iron logistics facilities, wharf development, power grid reinforcement, etc.
Production capacity	Approx. 2 million tonnes/year
Start of production	First quarter of FY2028
GHG emissions reduction effect	Approx. 2.6 million tonnes/year

Notes:

*The Company's share of the cost will be financed with support from the debt guarantee program of the GX Acceleration Agency and other arrangements.

*The Company entered into Japan's first transition loan agreement under this program (March 2026).

Planned construction site of the innovative electric arc furnace and related facilities in the Kurashiki district



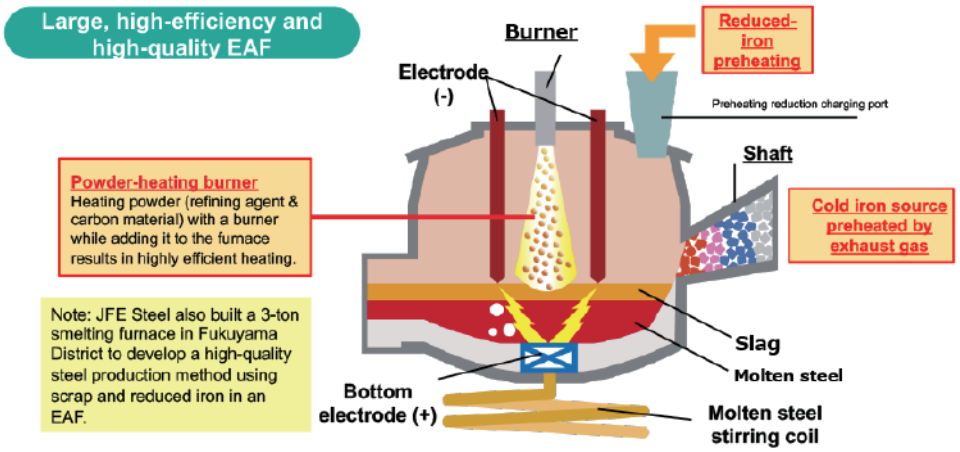
Demonstration Tests for Developing Manufacturing Methods for High-Quality Steel Products

With support from NEDO's Green Innovation Fund (GI Fund) Project, we are developing a process that reduces the electric arc furnace's melting power consumption and also enables high-speed melting of cold iron sources (scrap and direct-reduced iron). We will verify the following during demonstration tests.

- Optimal methods for preheating and feeding direct-reduced iron
- Methods for using heating burners
- Optimal methods for molten steel stirring

In the FY2025 stage-gate review, the progress and results of development were evaluated, and NEDO approved the project's continuation. Moreover, we will continue to pursue development toward the practical application of technologies for manufacturing high-quality steel products.

Research and Development for Electric Arc Furnaces



Feasibility Study on New Venture Business to Secure Direct-Reduced Iron Supply

In the transition phase up to 2030, we expect a shortage in domestic scrap supply. The use of direct-reduced iron is considered an effective way to supplement this in the production of high-quality steel using electric arc furnaces and in the reduction of GHG emissions from blast furnaces.

JFE Steel is conducting detailed feasibility studies with EMSTEEL, the largest steel producer in the UAE, and ITOCHU Corporation to establish a supply chain of direct-reduced iron with low carbon emissions. After the business scheme is finalized, we will begin producing direct-reduced iron (approximately 2.5 million tonnes per year) under a joint venture to be established in the UAE. As the largest off-taker, we will secure a long-term and stable supply of direct-reduced iron, mainly for the innovative electric arc furnace at the West Japan Works (Kurashiki district).

- Overview of EMSTEEL
  Company name: EMSTEEL
  Representative: HE Engineer Saeed Ghumran Al Remeithi (Group CEO)
  Business: Steel

The memorandum exchange ceremony held in Abu Dhabi, United Arab Emirates, in the presence of then Prime Minister Fumio Kishida (July 17, 2023)





Initiatives to Develop the GX Steel Market through GX Steel JGreeX™

Name origin: JFE + Green + GX
We invited the relevant departments to propose names and selected this one from the suggestions because it clearly represents a GX steel product provided by JFE Steel.
Logo design:
The logo combines the letter X with an arrow to express our intention to move forward toward carbon neutrality.

The steel industry is a hard-to-abate sector that emits significant amounts of CO_2 from its manufacturing processes. At present, it is difficult to substantially reduce GHG emissions immediately using the blast furnace process or provide a stable, large-scale supply of zero-emission steel products. Nevertheless, customer demand for such steel products is rising.

The Japan Iron and Steel Federation (JISF) has set out the GX steel concept in its GX Steel Guidelines*[1] for achieving a carbon-neutral society. Under this concept, GHG emission reductions generated through reduction projects with additionality are allocated to selected steel products. The guidelines define GX steel as "steel products that have a significant environmentally favorable impact due to additional direct emission mitigation actions (Scope 1) on a company-by-company basis, and that experience a significant price increase compared to general products when the costs associated with these actions are included." The Study Group on Green Steel for Green Transformation of the Ministry of Economy, Trade and Industry clearly states that the government will focus on policies such as government priority procurement by the government and other support measures to support the purchase of these steel products, classified as "Green Steel for GX."*[2] JFE Steel has started supplying GX steel JGreeX™ based on these guidelines to meet decarbonization needs in the supply chain. The GHG emission reductions and product emission intensity of JGreeX™ have received third-party certification from Nippon Kaiji Kyokai (ClassNK), which certified approximately 1.34 million tonnes of GHG emission reductions for FY2024. JFE Steel strongly emphasizes transparency in the methods for calculating reductions and allocating environmental value, and it is working to enhance reliability through third-party certification. In addition, it recognizes that the sound development of the GX steel market requires that the methods for calculating GHG emissions and reductions, as well as for attributing environmental value, are aligned with international rules such as the GHG Protocol and ISO standards. JFE Steel is actively engaged in these efforts.

Alongside these efforts to enhance transparency, JFE Steel is working to create and expand the GX steel market. In FY2025, the adoption of JGreeX™ expanded across a wide range of fields, including automobiles, shipbuilding, construction, and industrial machinery, and sales volume also increased. JFE Steel believes that support through policies such as subsidies and public procurement is important for further expanding the GX steel market, and it is actively engaging in dialogue with government authorities as well as customers. For details on these initiatives related to international rulemaking and policy proposals, please refer to Policy Engagement (P. 89).

The GX steel market is still developing, and one key challenge is to create a market that appropriately recognizes the environmental value generated through the capital investment and additional operating costs required for decarbonization. Implementing ultra-innovative technologies for the innovative electric arc furnace requires an enormous investment, and its deployment depends on customers choosing GX steel as well as a society-wide mechanism for recognizing its value, including the development of international rules and policy support.

> *1 Japan Iron and Steel Federation: GX Steel Guidelines
(https://www.jisf.or.jp/business/ondanka/kouken/greensteel/documents/GXSteelGuidelinev4.1_translation_May2026.pdf)

> *2 METI: Report by the Study Group on Green Steel for Green Transformation (https://www.meti.go.jp/english/press/2025/0123_001.html)

Overview of JGreeX™ Adoption



Overview of JGreeX™ Supply

Supply start	First half of FY2023
Supply capacity	Approx. 500 kilotonnes (FY2025 onward)
Target products	All steel products produced by JFE Steel
Certification body	Nippon Kaiji Kyokai (ClassNK)

JGreeX™ Sales Performance (September 2024 Onward)

Application Field	Details	Timing	URL
Construction	High-strength bolts for construction	March 2025	https://www.jfe-steel.co.jp/release/2025/03/250326.html (Japanese only)
	Overhead crane	July 2025	https://www.jfe-steel.co.jp/en/release/2025/07/250707.html
Shipbuilding	General cargo ship	June 2025	https://www.jfe-steel.co.jp/en/release/2025/06/250612.html
	Gutt ship	December 2025	https://www.jfe-steel.co.jp/release/2025/12/251202-2.html (Japanese only)
Plant	Large industrial transformer	February 2025	https://www.jfe-steel.co.jp/release/2025/02/250203.html (Japanese only)
Industrial machinery	Motor surface mounters	September 2024	https://www.jfe-steel.co.jp/en/release/2024/09/240903.html
Steel pipe	Sales to steel pipe and tube trading companies	January 2025	https://www.jfe-steel.co.jp/en/release/2025/01/250129.html
Steel sheets and steel pipes	Memorandum of understanding (MOU) with manufacturer	September 2024	https://www.jfe-steel.co.jp/en/release/2024/09/240924.html
Automotive	Automotive components	April 2025	https://www.jfe-steel.co.jp/en/release/2025/04/250424-2.html
		November 2025	https://www.jfe-steel.co.jp/release/2025/11/251111.html (Japanese only)
		January 2026	https://www.jfe-steel.co.jp/en/release/2026/01/260129.html

Initiatives for Achieving Carbon Neutrality by 2050

We are engaged in a multi-pronged approach to developing ultra-innovative technologies, such as carbon-recycling blast furnaces (CR blast furnaces), hydrogen steelmaking (direct reduction), and the electric arc furnace process (high-efficiency, large-scale electric arc furnaces), to achieve carbon neutrality by 2050, as announced in the JFE Group Environmental Vision for 2050. We are particularly focused on a technology that combines a CR blast furnace and CCU, which allows us to efficiently mass-produce high-grade steel and reuse CO_2 in the blast furnace. Measures such as converting surplus CO_2 into basic chemicals, including methanol, and storing it underground (CCS) can help achieve net zero emissions.

Demonstration Tests for NEDO Project (GREINS) for Hydrogen Utilization in Iron and Steelmaking Processes

JFE Steel formed a consortium with Nippon Steel Corporation, Kobe Steel, Ltd., and the Japan Research and Development Center for Metals and was jointly commissioned by the New Energy and Industrial Technology Development Organization (NEDO) to undertake the Green Innovation Fund Project (GREINS) for Hydrogen Utilization in Iron and Steelmaking Processes, and is working toward achieving carbon neutrality by 2050.

In order to further advance the development of ultra-innovative technologies to achieve carbon neutrality by 2050, JFE Steel has decided to construct all the necessary facilities for the demonstration tests for the project centrally in the East Japan Works (Chiba district) to increase the efficiency of the development effort. We will work together with consortium members to accelerate the development of ultra-innovative technologies.

Details of the Planned Demonstration Tests

- Carbon-recycling pilot blast furnace (150 m^3)
  Started construction in 2023, began demonstration tests in May 2025 to complete demonstration tests by FY2026.
- Direct reduction compact bench pilot furnace
  Started construction in 2023, began demonstration tests in December 2024 to complete demonstration tests by FY2026.
- Pilot electric arc furnace (10 t pilot furnace)
  Started construction in 2023, began demonstration tests in February 2025, completed demonstration tests at the end of FY2025, passed the stage gate review in June 2026, and received NEDO approval to continue the project.

Details for each are as follows.

Carbon-Recycling Blast Furnaces

Technical Features of a CR Blast Furnace

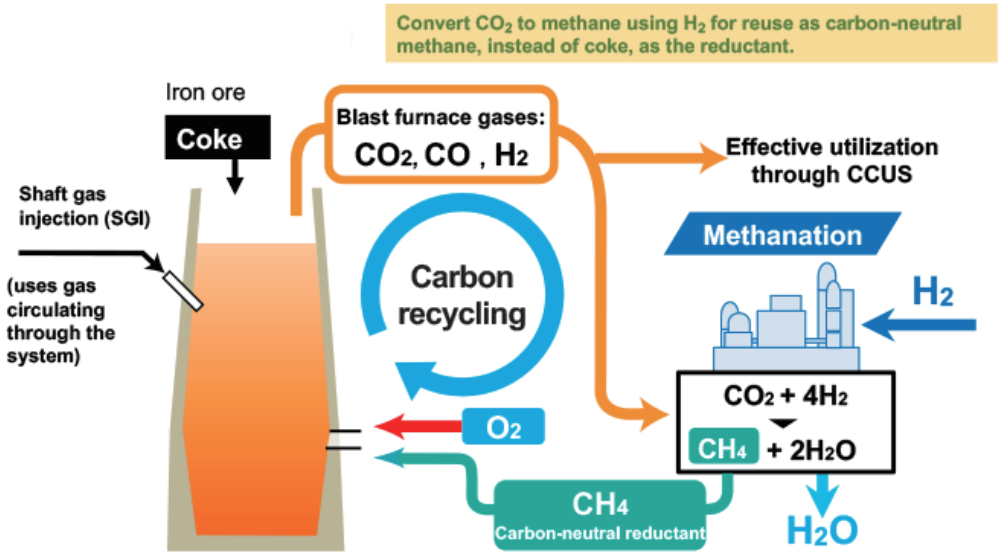
The CR blast furnace incorporates an ultra-innovative technology that converts CO_2 in the furnace exhaust gas into carbon-neutral methane through methanation, which is then reused as reducing material in the furnace. The technology, together with other measures, is expected to reduce CO_2 emissions by 50% compared to conventional blast furnaces and to ultimately help achieve carbon neutrality by leveraging CCU/CCUS. The thermal efficiency of the process can be further enhanced by replacing the air blown into the blast furnace with pure oxygen, allowing the energy used to heat the nitrogen in the air to then be used to heat methane. In addition, the lack of nitrogen facilitates the separation of CO_2, so the equipment necessary to separate CO_2 for methanation can be more compact and efficient and CCUS can be carried out efficiently.

Overview of the Demonstration Tests

We are developing a process for converting the CO_2 produced in the blast furnace into methane using hydrogen, allowing the carbon to be repeatedly used in the furnace as a reducing agent and thus reducing CO_2 emissions. We will verify the following during demonstration tests.

- Methods for blowing a large volume of methane along with oxygen into the furnace
- Applications for the heating burner that uses the circulation gas
- Methods for linking the operations of the furnace and the methanation facility that converts CO_2 from the blast furnace gases to methane

Overview of Carbon-Recycling Direct Furnaces



Development of Direct Hydrogen Reduction Technology (Carbon-Recycling Direct Reduction Process)

Hydrogen reduction ironmaking technology is another steelmaking process that the JFE Group is working on to achieve carbon neutrality. With this technology, the natural gas currently used in direct reduction ironmaking is replaced by 100% hydrogen to eliminate CO_2 emissions when iron ore is reduced.

Technology for Processing Raw Materials

Currently, the only raw material that can be used for direct reduction ironmaking is high-grade iron ore. Its production volume, however, is limited, and we expect it will become even more difficult to obtain in the future if direct reduction ironmaking were to expand worldwide.

To address this, JFE and one of its iron ore suppliers, BHP, are collaborating in the development of a new raw material processing technology for low- and medium-grade ores, which are currently used as raw materials for blast furnaces due to their large production volume. We are hoping that this new technology will allow us to use low- and medium-grade ores as raw materials for direct reduction ironmaking, thus expanding the raw material sourcing for direct reduction ironmaking.

Technology for Pre-Heating Raw Materials, Technology for Heating Hydrogen Gas

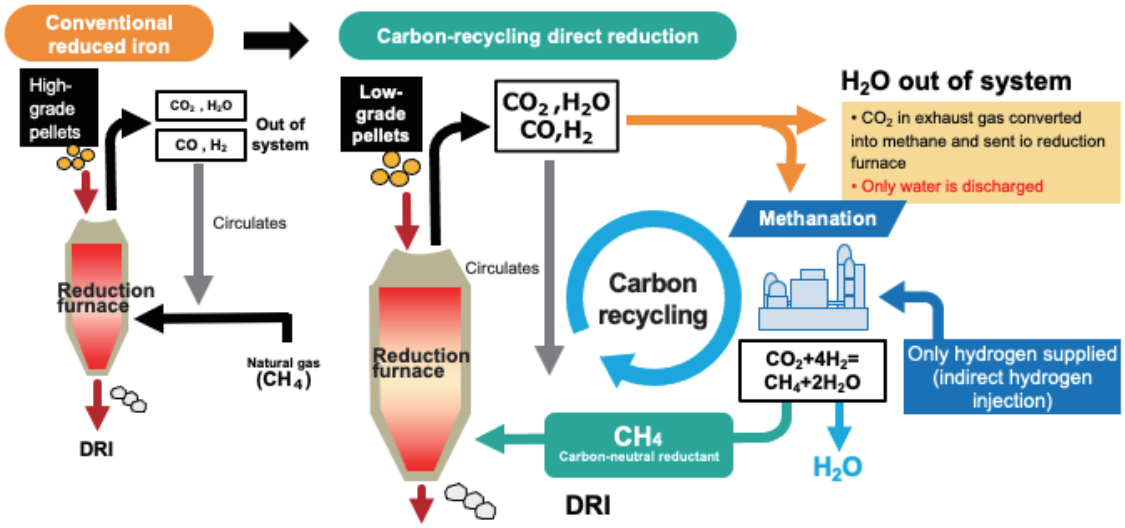
One challenge of hydrogen reduction is that the reduction of iron ore by hydrogen is an endothermic reaction, which means that heat must be applied externally for the reaction to proceed. A sufficient reduction reaction may not take place if there is not enough heat. Thus, technologies for heating raw materials and hydrogen gas must be developed.

Overview of the Demonstration Tests

We are developing a process whereby the CO_2 produced in the direct-reduction furnace is converted into methane through methanation with hydrogen, allowing the carbon to be repeatedly used in the furnace as a reducing agent and enabling repeated carbon recycling while reducing CO_2 emissions. We will verify the following during demonstration tests.

- Optimal methods for recycling CO_2 through methanation
- Methods for using low-grade ores

Carbon-Recycling Direct Reduction Process



Progress in Trial Production of Direct-Reduced Iron Using Green Hydrogen

Under NEDO's Green Innovation Fund Project "Hydrogen Utilization in Iron and Steelmaking Processes," we successfully produced direct-reduced iron using green hydrogen*1 on a trial basis for the first time in Japan*2 under the theme "Development of Direct Hydrogen Reduction Technology for Reducing Low-Grade Iron Ore Using Only Hydrogen / Development of Direct Hydrogen Reduction Technology."

This trial production used green hydrogen supplied from hydrogen production facilities constructed under NEDO's Development of Technologies for Realizing a Hydrogen Society*3, together with the direct hydrogen reduction test facilities constructed under the project. This was made possible through coordinated efforts to develop green hydrogen production and utilization technologies.*4

We will continue to advance the development of direct hydrogen reduction technology and work toward its deployment.

Direct-reduced iron produced on a trial basis using green hydrogen*4



*1 As of July 2026, according to NEDO research.

*2 Hydrogen produced by electrolyzing water using renewable energy, without emitting CO_2 during the production process.

› ***3 NEDO Development of Technologies for Realizing a Hydrogen Society: "Development of Power-to-Gas System Technology Aimed at Building a CO_2-Free Hydrogen Society" (Japanese only)** (https://www.nedo.go.jp/content/100950549.pdf)

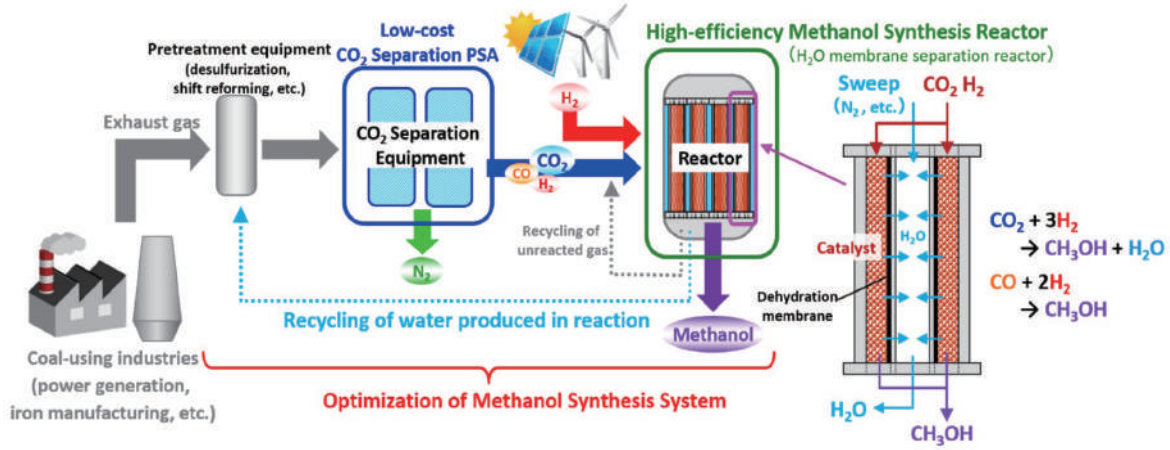
› ***4 Japan's First Successful Trial Production of Direct-Reduced Iron Using Green Hydrogen (Japanese only)** (https://www.jfe-steel.co.jp/release/2026/07/260731.html)

CCUS Initiatives

Development of an Optimal System for Methanol Synthesis Using CO_2

JFE Steel is working on the Optimum System for Methanol Synthesis Using CO_2, an R&D project, in collaboration with the Research Institute of Innovative Technology for the Earth (RITE) (see figure). On-site construction of a test facility commenced in FY2022 in the Fukuyama district of the West Japan Works, with operations scheduled to start in FY2023 and actual gas demonstration tests to be completed by the end of FY2026. The project focuses on establishing an optimal overall methanol synthetic system, mainly by developing technologies for low-cost CO_2 separation and high-efficiency methanol synthesis. The ultimate goal is to combine this new system with carbon-recycling blast furnaces and other ironmaking processes to achieve a large-scale CCU process. These results were obtained through R&D commissioned by NEDO (JPNP16002).

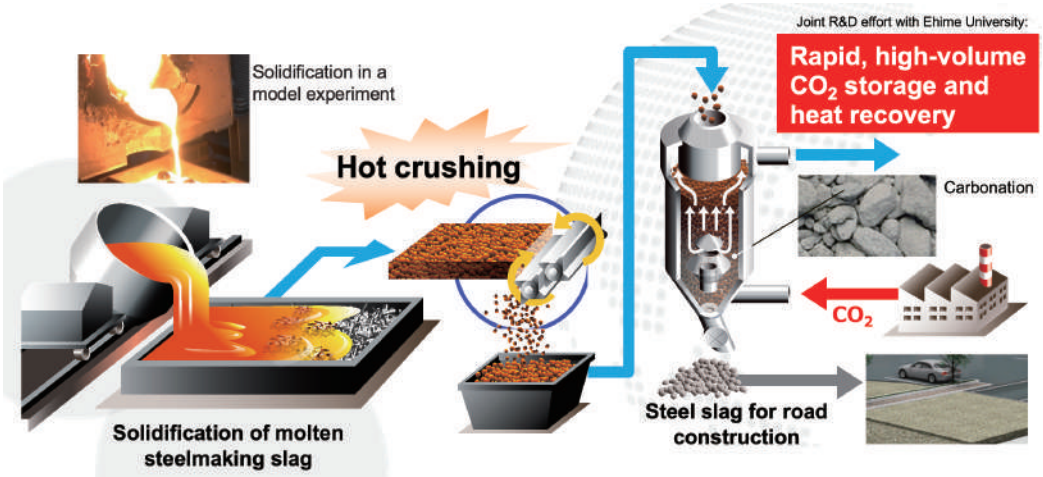
Methanol Synthesis Flow Using CO_2



Innovative CO_2 Sequestration Technology through Quick, Large-Quantity Carbonation of Steel Slag

JFE Steel is also collaborating with Ehime University to promote the NEDO project: Innovative CO_2 Sequestration Technology through Quick, Large-quantity Carbonation of Steel Slag. We have already confirmed the process principle, constructed facilities for demonstration testing toward practical application in the Chiba district of the East Japan Works, and commenced tests in FY2025. Through this research and development, we will sequester the CO_2 generated from ironmaking processes, such as carbon-recycling blast furnaces, and from nearby thermal power plants in slag, while at the same time verifying technologies for recovering sensible heat from high-temperature slag and converting the steel slag to roadbed materials and other products.

Quick, Large-Quantity Carbonation Flow of Steel Slag

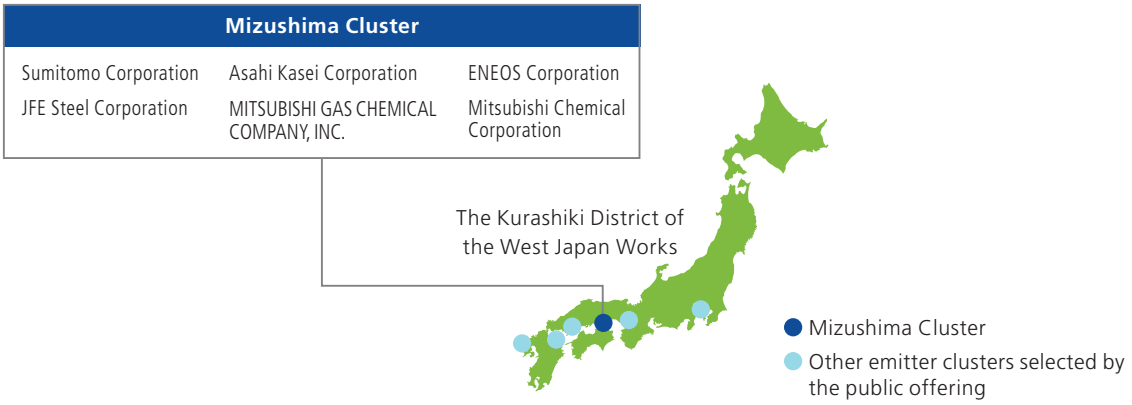


*This technological development is being carried out as a project commissioned by the New Energy and Industrial Technology Development Organization (NEDO) under its public solicitation for "Development of Technologies for Carbon Recycling and Next-Generation Thermal Power Generation/Development of Technologies for CO_2 Reduction and Utilization."

Studies Toward Realizing CCS

In its public offering for FY2026, concerning "Design Work for Separation, Capture, Liquefaction, Temporary Storage, and Shipping Facilities for Ship-Based Advanced CCS Projects" the Japan Organization for Metals and Energy Security (JOGMEC) selected the "Mizushima Cluster" (for the Kurashiki district of the West Japan Works), in which JFE Steel participates. Through collaboration with CO_2 emitters located in the Mizushima Industrial Complex, we are promoting studies aimed at realizing CCS. In addition, we are continuing to conduct our own study in the Fukuyama district of the West Japan Works and the Chiba district of the East Japan Works. In FY2025, we examined the facility configurations and operating policies required in each district for separation and capture, liquefaction, utility supply, and other functions. We will advance studies and preparations for project implementation, on the assumption that government support will be secured.

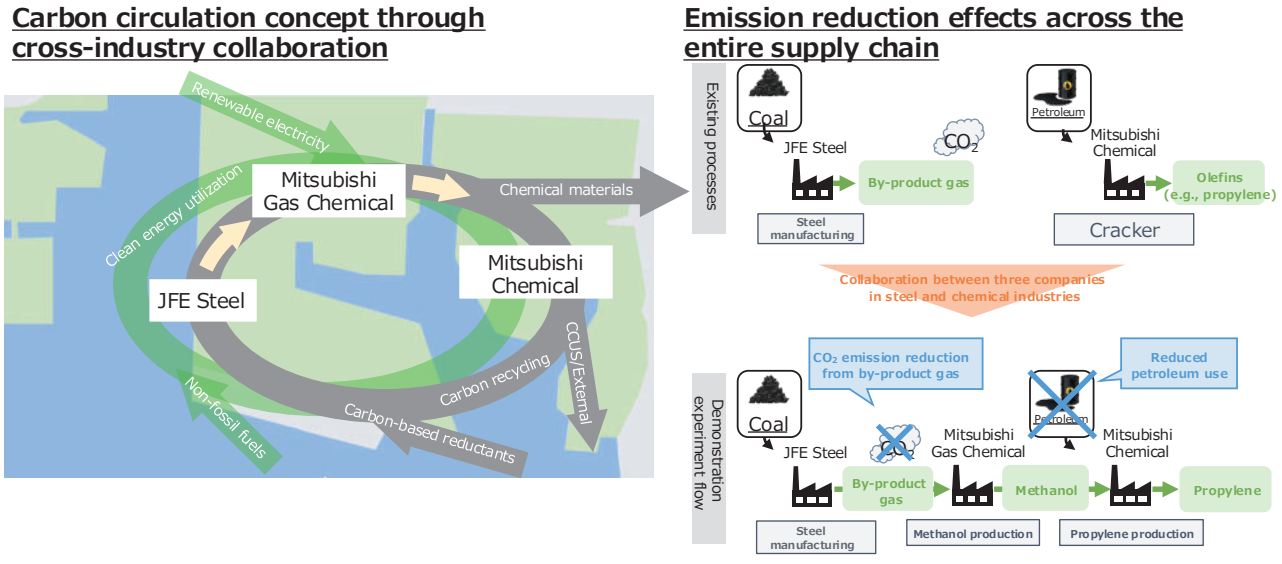
Consideration at Mizushima Cluster



Initiatives for Inter-Company Collaboration at the Mizushima Complex

JFE Steel Corporation, Mitsubishi Gas Chemical Company, Inc. (Mitsubishi Gas Chemical), and Mitsubishi Chemical Corporation (Mitsubishi Chemical) have signed a memorandum of understanding concerning a demonstration project at the Mizushima Complex (Kurashiki City, Okayama Prefecture). The project converts steelmaking by-product gas into methanol and then into propylene, a raw material for plastics. A new initiative within the Mizushima Complex promotes collaboration among hard-to-abate sectors (industries where GHG emissions are difficult to reduce). By utilizing CO_2 contained in byproduct gases from steel manufacturing processes to produce valuable chemicals, the project provides a model for collaborative CO_2 utilization, with the aim of launching the demonstration in FY2026. Looking ahead, the initiative intends to develop into a conceptual framework for carbon recycling through the collaboration of the steel and chemical industries. This approach is expected to reduce GHG emissions compared to traditional fossil resource-based methods for chemical production.

Inter-Company Collaboration at the Mizushima Complex



List of Related Initiatives

Reduce CO_2 Emissions at JFE Steel		
Carbon neutrality	Key initiatives	**JFE Group Environmental Management Strategy, Presentation Material** (https://www.jfe-holdings.co.jp/en/common/pdf/investor/climate/environmental-management-strategy250529-01.pdf)
	Demonstration tests	**JFE Steel Challenge to Achieve Carbon Neutrality through Green Transformation** (https://www.jfe-steel.co.jp/en/movie/#movie-Corporate)
Carbon-recycling blast furnace	Carbon-recycling blast furnace technology	**JFE Group Environmental Management Strategy, Presentation Material: Progress in the Development of CR Blast Furnaces** (https://www.jfe-holdings.co.jp/en/common/pdf/investor/climate/environmental-management-strategy250529-01.pdf)
		Challenge Zero: Challenge for development of super-innovative technologies focusing on Carbon-recycling Blast Furnace+CCU (https://www.challenge-zero.jp/en/casestudy/812)
	CCU/CCUS	**Challenge Zero: Technology of CO_2 utilization** (https://www.challenge-zero.jp/en/casestudy/391)
New technology to process raw materials for hydrogen direct reduction ironmaking	Development of technology for hydrogen direct reduction	**JFE Group Environmental Management Strategy, Presentation Material: Progress in the Development of the Direct Hydrogen Reduction Method** (https://www.jfe-holdings.co.jp/en/common/pdf/investor/climate/environmental-management-strategy250529-01.pdf)
	Collaboration with a material supplier	**JFE Steel and BHP to address decarbonization in steelmaking process** (https://www.jfe-steel.co.jp/en/release/2021/210210.html)
Expanded use of scrap and direct-reduced iron	Eco-friendly converter-type molten iron pretreatment process DRP™	**Increased Use of Scrap Iron in Steelmaking Process to Reduce CO_2 Emissions** (https://www.jfe-steel.co.jp/en/release/2022/220621.html)
		Feasibility Study on Building a Supply Chain of Direct-Reduced Iron with Low Carbon Emissions (https://www.jfe-steel.co.jp/en/release/2022/220901.html)
	Feasibility study on new venture business to secure direct-reduced iron supply	**Collaboration to Establish a Supply Chain of Ferrous Raw Material with Low Carbon Emissions** (https://www.jfe-steel.co.jp/en/release/2023/230718.html)
	Development of electric arc furnace process technology	**JFE Steel Carbon Neutrality Strategy Briefing: Large, High-efficiency EAFs** (https://www.jfe-steel.co.jp/en/company/pdf/carbon-neutral-strategy_231108_1.pdf)
	Adoption of electric arc furnace process	**Start of Operation and Completion Ceremony for the Electric Arc Furnace at the No. 4 Steelmaking Shop, East Japan Works (Chiba district) (Japanese only)** (https://www.jfe-steel.co.jp/release/2026/04/260430.html)
		JFE Steel to Introduce Advanced, High-Efficiency, Large-Scale Electric Arc Furnace in Japan (https://www.jfe-steel.co.jp/en/release/2025/04/250410.html)
CO_2 utilization and storage technology	CO_2 utilization technology	**Novel Processes for Manufacturing Valuable Materials Using Coal-Derived CO_2 Selected for NEDO Projects** (https://www.jfe-steel.co.jp/en/release/2021/211015.html)
	Testing for practical use	**JFE Steel Moves Ahead with Testing CO_2-utilization Technologies Aimed at Achieving Carbon Neutrality** (https://www.jfe-steel.co.jp/en/release/2022/220620-2.html)
		JFE Steel, Mitsubishi Gas Chemical, and Mitsubishi Chemical Collaborate to Develop a Carbon Recycling Supply Chain at Mizushima Complex (https://www.jfe-steel.co.jp/en/release/2025/03/250324.html)
	Establish CCS value chain	**Contract Signed with JOGMEC for Design Work Related to Ship-Based Advanced CCS Project Aiming to establish one of Japan's largest CCS hubs at the Mizushima Industrial Complex** (https://www.jfe-steel.co.jp/en/release/2026/08/260824.html)
		The Chugoku Electric Power and Nippon Gas Line Participate in the Joint Evaluation to Establish a CCS Value Chain Originated from Japan for the CCS Project in Malaysia (https://www.jfe-steel.co.jp/en/release/2024/02/240226.html)

Introduction of Internal Carbon Pricing (ICP)

Since the steel industry is one of the hard-to-abate sectors, the introduction of GHG reduction technologies is essential for achieving carbon neutrality. As a leader in development of carbon-neutral technologies, JFE Steel aims to achieve carbon neutrality by 2050 through the development and implementation of these technologies.

Stakeholders, including investors and ESG rating agencies, have recently shown more interest in how companies incorporate the risks and opportunities associated with the future introduction of carbon pricing and the transition to a decarbonized society into their management decisions. JFE Steel uses ICP as a reference indicator when reflecting in its management decisions the carbon value created by decarbonization technologies and the carbon cost burden that may arise in the future.

At JFE Steel, GX investments fall into two broad categories: (1) Ongoing investment in GHG emission reductions using existing technologies, and (2) Investment in the development and implementation of innovative GHG reduction technologies such as innovative electric arc furnaces and CCS. These two categories differ significantly in investment scale, payback period, and assumptions about the future business environment. JFE Steel uses different internal carbon prices (ICPs) suited to the characteristics of each category to appropriately evaluate both the carbon cost burden that may arise in the short to medium term and the long-term carbon value in pursuit of achieving carbon neutrality by 2050.

For investments in GHG emission reductions using existing technologies under (1), JFE Steel uses the GX-ETS price (the average of the upper and lower limit prices for FY2026: 3.0 thousand yen/t-CO_2*[1]) to reflect the carbon cost burden expected under the current regulatory environment. In this way, the carbon cost burden that may arise in the future are taken into account in the economic evaluation of energy-saving and other investments.

On the other hand, for additional GX investments, such as the development and implementation of innovative GHG reduction technologies under (2), the cost burden and investment scale associated with technological development are significant, and the payback period is long, making it difficult to adequately evaluate their future value based on current carbon prices alone. JFE Steel therefore uses the 2030 carbon price published by the IEA (US$140/t-$CO_2$*[2]) as a reference indicator of the future carbon value required to realize a net-zero society by 2050.

However, these ICPs are flexibly reviewed when making investment decisions, taking into account the outlook for future profitability and risks, including the transition to a decarbonized society, the demand environment for GX steel*[3], and government support for GX investment. JFE Steel uses ICP as a reference indicator to visualize the cost impact of the future introduction of carbon pricing and the carbon value created by decarbonization, and to reflect these factors in business feasibility assessments and investment prioritization.

JFE Steel will build on its use of ICP in management decisions to advance the deployment of GHG reduction technologies with the aim of achieving carbon neutrality by 2050.

› *1 Ministry of Economy, Trade and Industry: Reference Upper Limit Transaction Price and Adjustment Reference Transaction Price for FY2026 (1.7–4.3 thousand yen/t-CO_2) (Japanese only)
(https://www.meti.go.jp/shingikai/sankoshin/sangyo_gijutsu/emissions_trading/pdf/20251219_2.pdf)

› *2 IEA Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach (2023 Update)
(https://iea.blob.core.windows.net/assets/8ad619b9-17aa-473d-8a2f-4b90846f5c19/NetZeroRoadmap_AGlobalPathwaytoKeepthe1.5CGoalinReach-2023Update.pdf)

› *3 Initiatives to Develop the GX Steel Market through GX Steel, JGreeX™ (P. 60)

Initiatives for Greater Contribution to Reducing GHG in Society as a Whole

The JFE Group is promoting a variety of initiatives to reduce GHG, such as offshore wind power generation projects and initiatives in renewable energy-related fields, with a focus on its engineering business. In addition, in fields where demand is growing for eco-products such as electrical steel sheets and ultra-high-tensile steel sheets, we are collaborating with Group companies and others to maximize overall effectiveness.

Initiatives in the Engineering Business Contributing to GHG Reduction

Demand is expected to rise for power generation plants using renewable energy sources that do not emit carbon. Through the engineering business, the JFE Group is handling the design, procurement, construction, and operation of renewable energy generation plants, including biomass*1, geothermal*2, solar*3, and onshore wind power*4. We are also working to increase the amount of power generated at waste treatment facilities in order to promote recycling and the effective use of resources.

Furthermore, we are actively engaged in the retailing of electricity, which uses this renewable energy as the main power source, supporting the establishment and operation of new regional electricity companies*5 that focus on local production and consumption of energy using renewable sources, and expanding the Multisite Energy Total Service (JFE-METS)*6, which optimizes energy use for multiple sites within the same corporate group through centralized management.

As initiatives for carbon neutrality, we are developing technologies to safely and efficiently transport large amounts of hydrogen, ammonia, and CO_2, and working on demonstrating a process that separates and collects CO_2 for reuse from the exhaust gas of waste treatment facilities.

Initiatives for material recycling include recycling waste plastics by directing unsorted post-use plastics to either material recycling or chemical recycling, depending on their properties*7; bottle-to-bottle (BtoB)*8, an effort to recycle collected PET bottles into raw material for new bottles; and recycling solar panels that are discarded due to age-related deterioration.

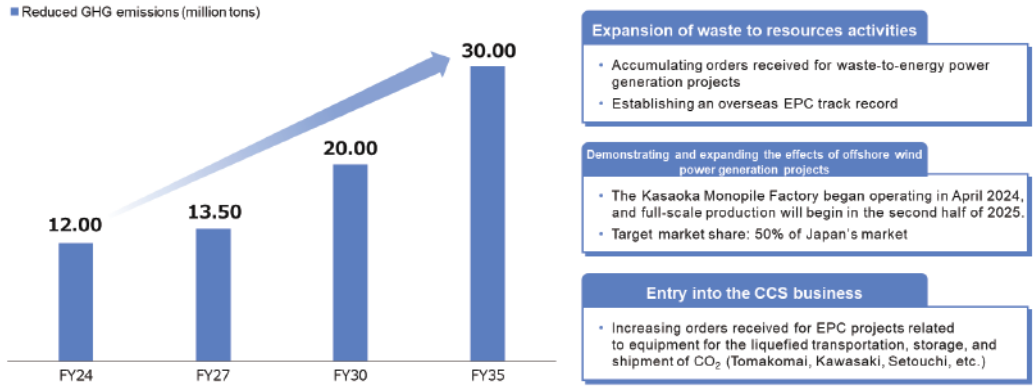
- ***1 Biomass Power Generation Business (Japanese only)** (https://www.jfe-eng.co.jp/products/electric-power/electric07.html)
- ***2 Geothermal Power Generation Systems** (https://www.jfe-eng.co.jp/en/products/power-generation/plant01.html)
- ***3 Solar Power Generation Business (Japanese only)** (https://www.jfe-eng.co.jp/products/electric-power/electric05.html)
  Solar Power Generation, JFE Technos (Japanese only) (https://www.jfe-technos.co.jp/products/solar/)
- ***4 Onshore Wind Power Generation Business (Japanese only)** (https://www.jfe-eng.co.jp/products/electric-power/electric06.html)
- ***5 Support for New Regional Electricity Projects** (P. 72)
- ***6 JFE-METS (Japanese only)** (https://www.jfe-eng.co.jp/products/electric-power/electric04.html)
- ***7 Waste plastic recycling: Promoting Plastic Recycling** (P. 129)
- ***8 Bottle-to-bottle: Horizontal Recycling of PET Bottles** (P. 131)

Metrics and Targets (Plans and Results for Contribution to GHG Reduction in the Engineering Business)

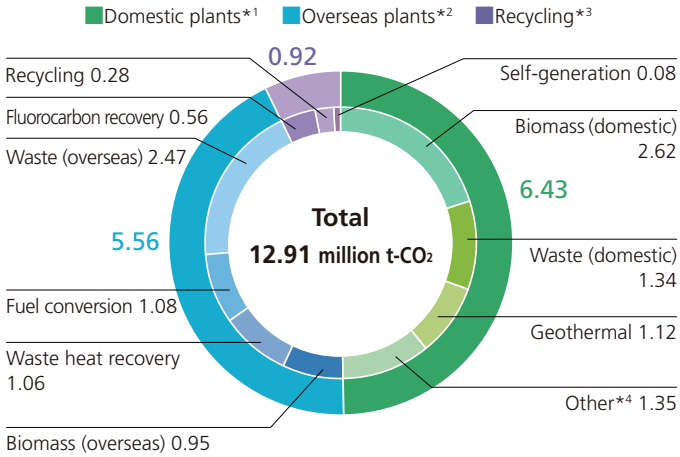
JFE Engineering contributes to GHG emissions reductions in society as a whole through its business operations, such as expanding renewable energy generation and constructing and operating plastic and food recycling plants. In FY2025, the Company contributed to reducing 12.91 million tonnes of GHG emissions (a 7.5% increase compared to FY2024) across society. JFE Engineering will further expand its business and aims to contribute to GHG emissions reductions of 13.5 million tonnes in FY2027, 20 million tonnes in FY2030, and 30 million tonnes in FY2035.

With regard to JFE Engineering's GHG emissions, we set a KPI of reducing CO_2 emissions at our plants and offices by 40% in FY2025 compared to FY2013. Since FY2021, we have introduced on-site solar power PPAs and zero-emission electricity plans at the Yokohama head office and low-emission electricity at the Tsu Works. We consequently achieved a 79.5% reduction in FY2025 compared to FY2013. At the same time, we are promoting energy-saving activities at our plants and offices. We will continue to steadfastly conduct business in ways that are environmentally sound, including expanding the use of renewable energy.

Engineering Business GHG Reduction Contribution Plan



JFE Engineering's Equivalent Contribution to GHG Reduction (FY2025)



*1 Data cover: JFE Engineering
*2 Data cover: JFE Engineering and Standardkessel Baumgarte GmbH (SBG), a German subsidiary of JFE Engineering Corporation
*3 Data cover: J&T Recycling Corporation and JFE Urban Recycle Corporation
*4 Others: Digestion gas, solar, wind, waste heat recovery, fuel conversion, energy service, biomass silos, and logistics products

For quantitative data for the JFE Engineering Group's GHG emissions, please refer to:
› **Environmental Data** (P. 273)

EN JFE Engineering's Commitment through Its Business

Under its corporate purpose to "Create, Care, Connect. The Foundations of Life—Just For the Earth," JFE Engineering is seeking to expand its contributions to GHG reductions, focusing on the key fields of waste to resource*1 and carbon neutrality*2.

As part of JFE Engineering's climate change initiatives, the following are examples of carbon neutral business activities. Food recycling and biogas power generation, as well as waste-to-energy power generation, are initiatives for the circular economy and carbon neutrality.

*1 Primarily promotes waste-to-energy power generation and recycling (food, plastics), etc.
*2 Primarily promotes renewable energy power generation and hydrogen/ammonia and CCUS, etc.

› Recycling Food Waste (P. 133)
› Construction and Operation of Waste-to-Energy Plants Overseas (Thermal Recovery) (P. 132)

EN The Energy Forest Project (Demonstration Project for Creating Stable and Effective Supply Systems of Woody Biomass Fuel)

The town of Yuni in Hokkaido and JFE Engineering are jointly carrying out an Energy Forest Project, which will continue until the end of FY2027. This project, named the JFE Forest NEXTGATE Project and drawn up by JFE Engineering, was selected by NEDO, a national research and development agency, for inclusion in the FY2023 Demonstration Project on Development of New Fuel Sources Such as Fast-growing Trees on August 3, 2023. JFE Engineering is specifically engaged in pioneering research for creating a large "energy forest," involving the silviculture of trees that grow well and fast in a subarctic climate (clean larch and Sakhalin willow) on land owned by the town of Yuni.

The town of Yuni is seeking to nullify GHG emissions by 2050 under the Yuni Zero Carbon City declaration. JFE Engineering is working with the town to contribute to carbon neutrality and prevent global warming, thereby fulfilling its corporate purpose, "Create, Care, Connect. The Foundations of Life—Just For the Earth."



› The Town of Yuni and JFE Engineering Enter into an Agreement Concerning the Energy Forest Demonstration Project (Japanese only)
(https://www.jfe-eng.co.jp/news/2024/20240520.html)

EN Aqua Connect Namie Corporation's Hydroelectric Power Generation Business at the Ukedogawa Hydro Power Plant

Aqua Connect Namie Corporation, a company established through the joint investment by JFE Engineering, The Tokyo Electric Generation Co., Ltd., and the Ukedogawa Land Improvement District (the town of Namie in the district of Futaba, Fukushima Prefecture), has been operating the Ukedogawa Hydro Power Station since May 2024. The station, which marks JFE Engineering's first venture into hydroelectric power generation, takes advantage of the agricultural water supplied by the Ogaki Dam to the ward of Odaka in the city of Minamisoma and to the towns of Namie and Futaba in the district of Futaba.

The Ukedogawa Hydro Power Station, with its waterwheel and power generator located at the foot of the Ogaki Dam, generates power by using the energy produced by the difference in water levels. All the power generated at this station is sold through the Feed-in Tariff System. Aqua Connect Namie Corporation is committed to operating the station safely and stably while supporting farmers in the Ukedogawa area. The company will thereby contribute to carbon neutrality and a sustainable future.



Celebrating the completed construction of the Ukedogawa Hydro Power Station



Water turbine for power generation

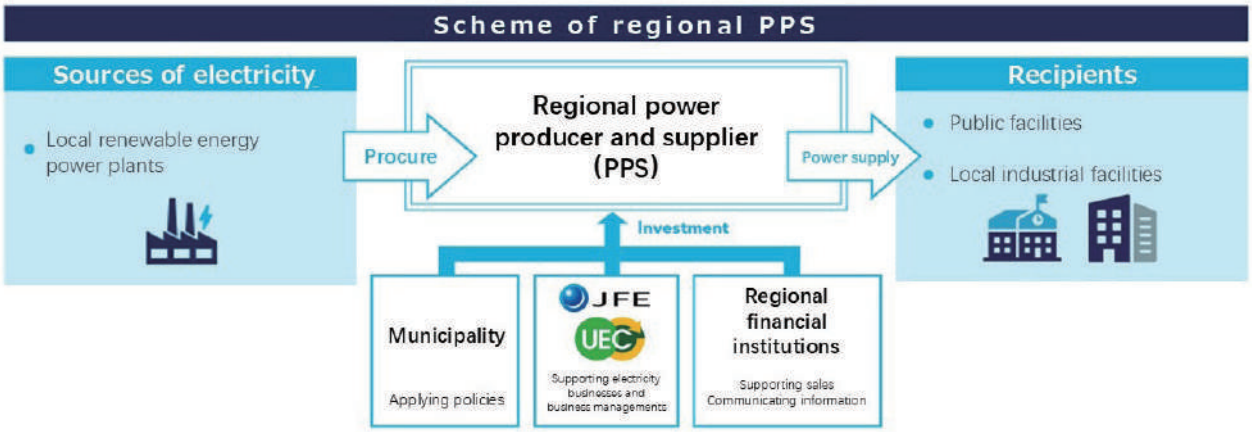
> **Aqua Connect Namie Corporation Launches Power Generation Business at the Ukedogawa Hydro Power Station (Japanese only)**
(https://www.jfe-eng.co.jp/news/2024/20240521.html)

EN Support for New Regional Electricity Projects

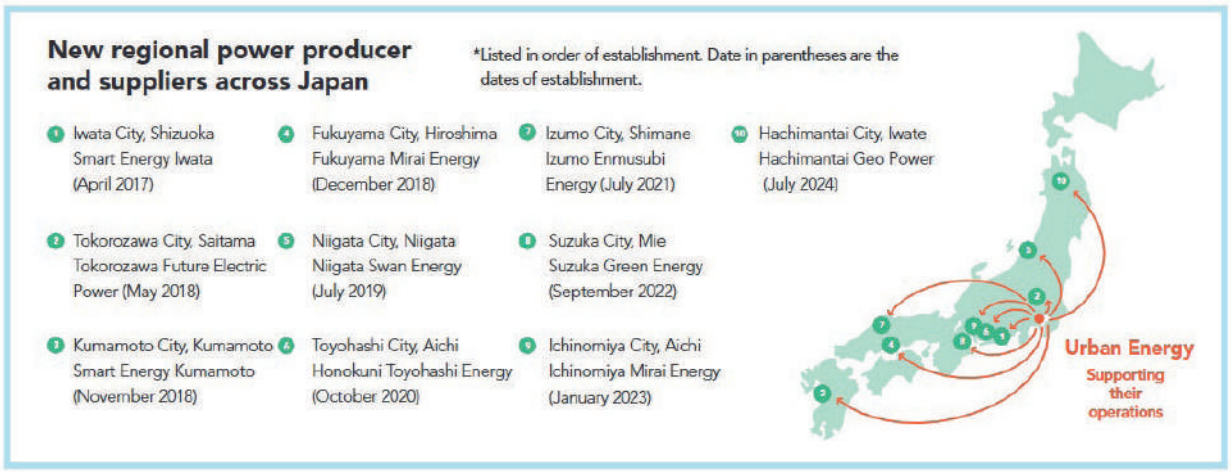
JFE Engineering is creating mechanisms for effectively using regional renewable energy sources such as wind and geothermal power and supplying electricity to local public facilities from renewable energy plants constructed by JFE Engineering, including waste-to-energy plants. These efforts support local production and consumption of energy.

Urban Energy Corporation (UEC), a subsidiary of JFE Engineering, provides consistent support for new regional electricity projects, from establishment to operation, with the goal of achieving regional decarbonization and stabilizing energy costs. Drawing on its extensive experience and expertise cultivated in the retail power business, UEC ensures stable and efficient operations, thereby contributing to the creation of sustainable communities.

New Regional Electricity Scheme Diagram



Record of Support for New Regional Electricity Projects



EN Development of SAF Synthesis Process

In collaboration with the University of Toyama, JFE Engineering is developing a catalytic process for synthesizing sustainable aviation fuel (SAF*[1]), which is expected to contribute to decarbonizing the aviation sector.

The process uses Fischer-Tropsch (FT) synthesis*[2] to produce SAF from synthesis gas composed of carbon monoxide and hydrogen. JFE Engineering has enhanced the SAF synthesis performance of a catalyst developed by Professor Noritatsu Tsubaki of the School of Engineering, University of Toyama*[3], [4]. The new catalyst achieves high performance with a yield*[5] of at least 50% for liquid hydrocarbons suitable for SAF production, and it is expected to enable a highly productive SAF synthesis process.

With conventional FT synthesis catalysts, the hydrocarbons produced must be converted into the carbon number range suitable for SAF through hydrocracking*[6]. When losses during this hydrocracking process are taken into account, the SAF yield typically remains at around 25%. In contrast, FT synthesis using the new catalyst eliminates the need for hydrocracking plants, which require significant capital investment, as well as additional hydrogen input. As a result, equipment costs can be significantly reduced while enabling SAF production with at least twice the yield of conventional processes using FT synthesis alone.

Currently, both in Japan and overseas, the primary feedstock for SAF production is used cooking oil. However, due to limited edible oil supply, feedstocks are expected to diversify to include biomass and waste materials such as municipal solid waste. Over the longer term, synthetic fuels produced by reacting carbon dioxide captured from power plants and factories with hydrogen derived from renewable energy sources are expected to play an important role*[7]. FT synthesis is essential for producing SAF from these feedstocks, and the new catalyst can be applied in such processes.

Together with the University of Toyama, JFE Engineering will continue to advance SAF synthesis processes utilizing this catalyst and hopes to contribute to the decarbonization of the aviation sector through the wider adoption of SAF.

*1 Sustainable aviation fuel. Various production pathways are being studied, including HEFA using used cooking oil, ATJ using bioethanol, and FT synthesis using gasified waste and other feedstocks.

*2 A catalytic process that produces petroleum substitute fuels such as synthetic diesel, as well as basic chemicals including alcohols and olefins, from synthesis gas composed of carbon monoxide and hydrogen.

*3 Source: "Integrated tuneable synthesis of liquid fuels via Fischer-Tropsch technology," Jie Li, Yingluo He, Li Tan, Peipei Zhang, Xiaobo Peng, Anjaneyulu Oruganti, Guohui Yang, Hideki Abe, Ye Wang, Noritatsu Tsubaki, Nature Catalysis, Vol. 1, 787–793, 2018

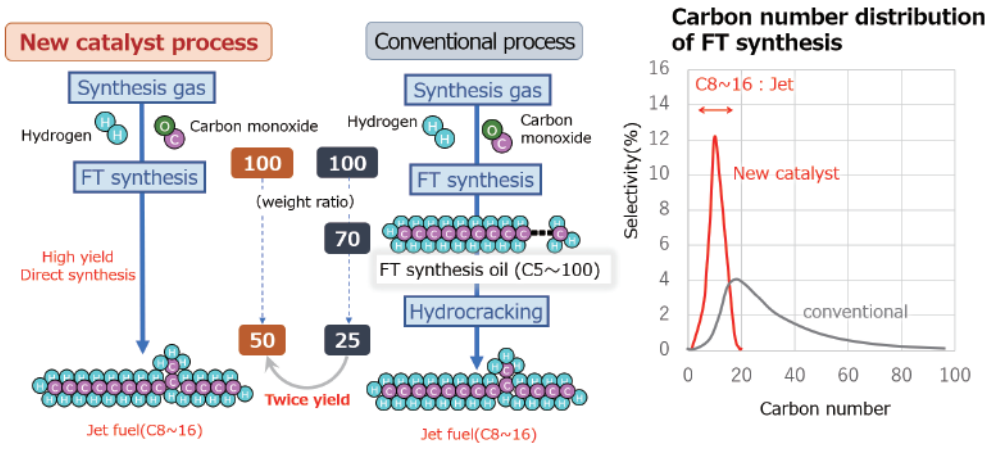
*4 Source: "Clever chemistry offers new source of jet fuel," Nature, Vol. 561, 286, 2018 (editorial)

*5 The proportion of carbon in the feed gas converted into the desired hydrocarbons (in this development, liquid hydrocarbons with carbon numbers from C8 to C16). It is an indicator that describes catalyst performance.

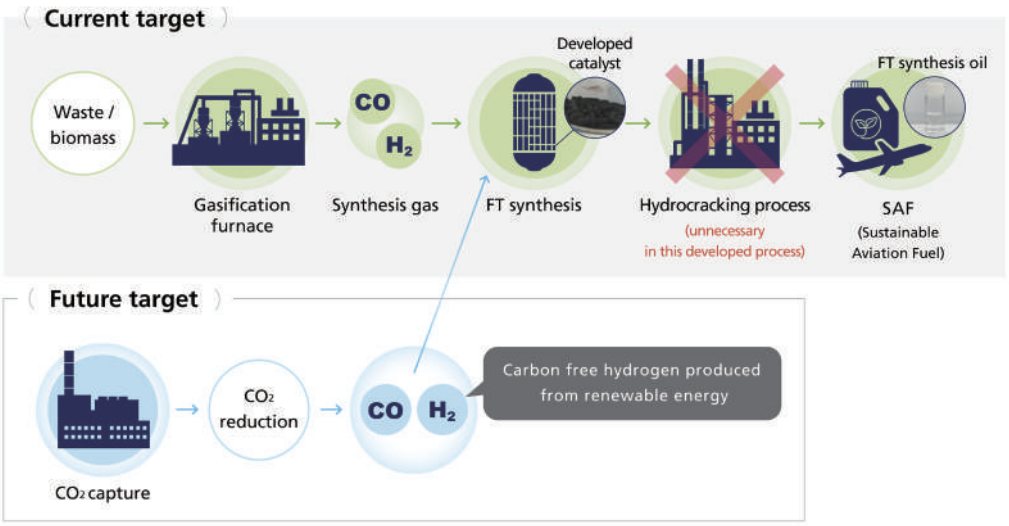
*6 A process in which hydrogen is added using a zeolite catalyst to break the chain structure of solid hydrocarbons (wax) with carbon numbers of 20 or higher into liquid hydrocarbons with smaller carbon numbers.

› *7 Source: Advisory Committee for Natural Resources and Energy, Basic Policy Subcommittee (61st meeting) materials (Japanese only)
(https://www.enecho.meti.go.jp/committee/council/basic_policy_subcommittee/2024/061/061_006.pdf)

Novel Catalyst Process



Process for Producing SAF via FT Synthesis



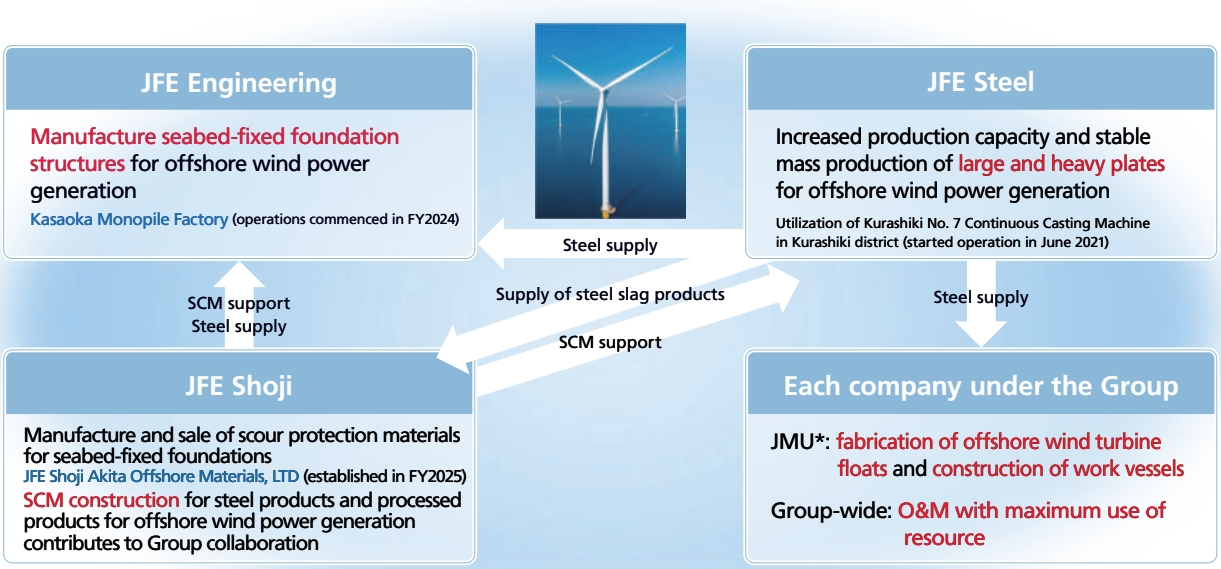
Offshore Wind Power Business Initiative

The JFE Group has positioned its offshore wind power business as a key initiative. With engineering as the core business, the Group is leveraging its diverse businesses to create synergies and deliver new added value. Specifically, we are commercializing the manufacture of offshore wind power generation foundations (monopiles, jackets) as well as O&M* services, establishing an integrated supply chain covering materials, foundation manufacturing, and O&M. We will continue to take advantage of the comprehensive strengths of the Group to commercialize this business, thereby significantly contributing to the JFE Group's efforts to achieve carbon neutrality and make progress toward the government's goal of realizing carbon neutrality.

*Operation and maintenance. Applies repair and diagnostic technologies.

Commercialization of Offshore Wind Power Business

- By commercializing our manufacturing of foundation structures (monopiles), we will become the forerunner in the business of offshore wind-power generation and establish a supply chain across the entire Group, including foundation manufacturing and O&M.
- We will strive to expand business in the field of renewable energy by leveraging the JFE Group's collective strengths (synergies), with JFE Engineering as the main player.



*Japan Marin United Corporation (equity method affiliate)

Technologies of Group Companies

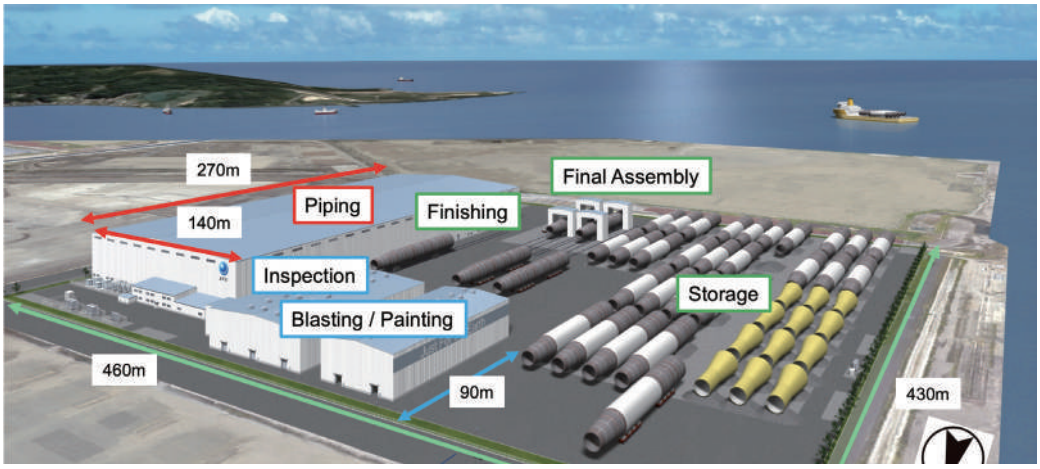
Category	Company	Details
Foundation structures	JFE Engineering	Seabed foundations (monopiles, jackets, etc.)
	Japan Marine United	Floating foundations (semi-submersible)
	JFE Steel	High-quality, large and heavy steel plates, high-strength steel (reduced using HBL series steel plates)
	JFE Shoji	Manufacture and sale of scour protection materials for seabed-fixed foundations
Construction	Japan Marine United	SEP vessels (self-elevating platform)
	JFE Engineering	JFE-RAPID (cable laying method)
		Battery systems for power storage
	GECOSS	Stands for large steel structures
	JFE Steel	Natural stone substitute materials (use of steel slags)
O&M (operation and maintenance)	JFE Engineering	Technologies for remote monitoring and operation
	JFE Advantech	Vibration measurement equipment and systems, sea monitoring tools (water quality, sea conditions)
	Japan Marine United	Offshore support vessels (work vessels)
	JFE Plant Engineering	Wind turbine maintenance (diagnosis and repair)
	JFE Technos	Technologies and expertise in planning, constructing, and maintaining onshore turbines
	JFE Techno-Research	Equipment evaluation and analysis for corrosion, fatigue, vibration, etc., diagnosis of remaining service life, strength and durability testing and evaluation techniques for large structures
Supply chain	JFE Shoji	Contribution to optimizing offshore wind power generation project execution

EN Japan's Only Monopile Manufacturing Base

JFE Engineering completed the Kasaoka Monopile Factory in Kasaoka, Okayama Prefecture and commenced operations in April 2024. Monopiles are the foundational structural components for offshore wind power generation and are extremely large steel structures, approximately 10 m in diameter, 100 mm thick, and 100 m long. This is the only monopile plant in Japan. To maximize production efficiency, the plant combines extensive grounds and a quay for direct shipment, state-of-the-art equipment such as large-diameter bending machines and welding machines for extra-thick plates, and efficient manufacturing processes based on experience in manufacturing large steel structures at the Tsu Works. In December 2025, JFE Engineering received an order to manufacture monopiles in Japan for the Offshore Wind Power Project Off Oga City, Katagami City, and Akita City, Akita Prefecture, and in February 2026, it began producing monopiles for this project. In addition, a corporate solar power PPA service was launched in June 2026 at the Kasaoka Monopile Factory, which is now manufacturing monopiles using electricity derived from renewable energy. At full capacity, the plant is expected to produce up to 100,000 tonnes annually and significantly contribute to the establishment of a domestic supply chain in the offshore wind power sector and to the realization of carbon neutrality.

Overview of the Kasaoka Monopile Factory

Construction site	Kasaoka City, Okayama Prefecture (JFE Steel West Japan Works Fukuyama area)	Investment amount	Approximately 40 billion yen* (plant building, mechanical equipment, quay reinforcement) *Includes the facility reinforcement cost of the Tsu Works.
Construction start	June 2022	Site area	Approximately 20 ha (includes storage area)
Operation start	April 2024	Production capacity	Approximately 80,000–100,000 tonnes per year (Approx. 50 sets)
Length of shipping quay	200 m (quay total length: 400 m)	Quay depth	–11 m



Layout of the Kasaoka Monopile Factory


Overall view of the Kasaoka Monopile Factory


Monopiles for offshore wind power foundations

EN Initiatives to Enter the Floating Foundation Manufacturing Business

In addition to manufacturing monopiles, which are bottom-fixed foundation structures for offshore wind power generation, JFE Engineering applied for and was selected to receive funding under the Ministry of Economy, Trade and Industry's FY2025 GX Supply Chain Construction Support Program III (Floating and Other Offshore Wind Power Generation Equipment) (the "Subsidy") in order to enter the floating foundation manufacturing business, which is expected to expand in the future.

With this Subsidy, JFE Engineering will make timely capital investments at the Tsu Works (Tsu City, Mie Prefecture) in light of market conditions to establish the capacity to mass-produce at least 24 floating foundations per year.

The Tsu Works has one of the largest marine docks in Japan and an extensive outdoor yard, as well as proven expertise and technical capabilities cultivated over half a century of manufacturing bridges and steel structures. JFE Engineering will leverage these strengths to lead Japan's offshore wind power industry as a manufacturer capable of producing a wide range of floating foundation designs and help accelerate the realization of a carbon-neutral society.



Project area (Tsu Works)

EN Offshore Wind Power Generation, a Foray into O&M through a Remote Integrated Management System

For more than 25 years since 1996, JFE Engineering has been involved in EPC for onshore wind power stations (131 generators at 25 sites) in addition to equipment supply and associated maintenance services. The company will fully leverage its deep, extensive expertise in onshore wind power generation as well as technologies owned by other JFE Group companies to grow and advance its O&M services for offshore wind power plants.

In October 2023, JFE Engineering launched a 20-year O&M contract for offshore wind power facilities (three generators with the maximum output of 7,495 kW) off the coast of Nyuzen in Toyama Prefecture. These facilities were built under Japan's first offshore wind energy project in a general sea area. Under this contract, JFE Engineering is using an integrated management system to remotely monitor an offshore wind power project for the first time. JFE Engineering will steadily build up its track record off the coast of Nyuzen while continuing to advance its own technologies and expertise.

In addition, the company jointly developed with the Institute of Science Tokyo the world's first technology for detecting anomalies in wind turbine blades by combining sound and video analysis. The technology enables blade inspections while wind turbines remain in operation, helping reduce inspection costs and achieve stable operation through the early detection of anomalies.



Nyuzen offshore wind power station (photo by VENTI JAPAN, Inc.)

› **World's First! Development of Anomaly Detection Technology for Wind Turbine Blades Using Sound and Video: Joint Development with the Institute of Science Tokyo Significantly Reduces the Risk of Wind Turbine Blade Failure (Japanese only)** (https://www.jfe-eng.co.jp/news/2026/20260108.html)

EN Demonstration Research on Cost Reduction for Floating Offshore Wind Power Generation

JFE Engineering, as a member of a consortium*1, jointly proposed the Southern Akita Floating Offshore Wind Demonstration Project Aimed at Overseas Expansion via Cost Reductions in response to NEDO's call for proposals under the Green Innovation Fund*2 Project/Cost Reductions for Offshore Wind Power Generation/Floating Offshore Wind Power Demonstration Project (Phase 2), and the proposal was selected.

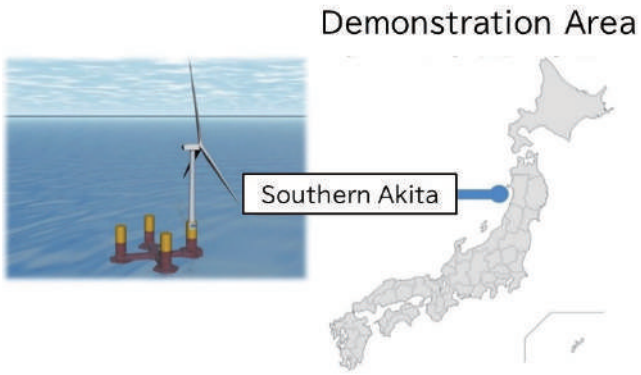
The project aims to establish a technology to commercialize floating offshore wind power generation at an internationally competitive cost level to support wider deployment in the future. The consortium plans to install two wind turbines, each with an output of over 15 MW, approximately 25 km off the coast of southern Akita Prefecture in waters about 400 m deep, with a demonstration operation scheduled to begin in October 2029. The project period will span July 2024 to March 2031.

*1 Consortium members: Marubeni Offshore Wind Development Corporation; Tohoku Electric Power Co., Inc.; Akita Floating Offshore Wind LLC; Japan Marine United Corporation; TOA CORPORATION; TOKYO SEIKO ROPE MFG. CO., LTD.; Kanden Plant Corporation; JFE Engineering Corporation; and NAKANIHON AIR Co., Ltd.

*2 A fund established by NEDO under the Ministry of Economy, Trade and Industry to support companies committed to ambitious goals toward achieving carbon neutrality by 2050, providing continuous support for research, development, demonstration, and social implementation for up to ten years.

Project Overview (Planned)

Project name	Southern Akita Floating Offshore Wind Demonstration Project Aimed at Overseas Expansion via Cost Reductions
Demonstration site	Southern coast of Akita Prefecture (approx. 25 km offshore, water depth approx. 400 m)
Turbine output	Over 15 MW
Number of turbines	2
Floating type	Semi-submersible
Project period	July 2024–March 2031



ST Developed Steel Plates with a Maximum Thickness of 130 mm for Use in Foundations for Wind Power Generation, Performance Evaluation by the Ministry of Economy, Trade and Industry Completed

JFE Steel has developed steel plates with a maximum thickness of 130mm, which are suitable for use in foundations for wind power generation (e.g. monopiles, jackets and wind turbine towers). Performance evaluations have been completed at the Ministry of Economy, Trade and Industry (METI)*1. This allows steel plates exceeding 100 mm in thickness to be used in domestic offshore wind power projects.

In recent years, the size of wind turbines used for wind power generation has increased. In particular, offshore wind power generation will increasingly rely on turbines with a generating capacity of over 10 MW per unit. Conversely, the use of steel plates exceeding a thickness of 100mm for foundations has not been permitted in Japan's wind power generation. Consequently, there has been a strong demand for the development of thicker steel plates for these large-scale turbines.

To meet these needs, we have developed steel plates with a maximum thickness of 130 mm. These plates are as strong as JIS SM520, which is used in foundations of wind power generation. This newly developed steel plate is also included in the J-TerraPlate™ large and heavy steel plate line-up for wind power generation*2. It can significantly contribute to the introduction of large-size wind turbines by reducing welding labor and other costs. We have already received enquiries from several operators regarding its use in domestic offshore wind power projects and are currently holding discussions.

> ***1 Website of the Ministry of Economy, Trade and Industry: Notification of performance evaluation of JFE Steel Corporation's rolled steel for welded structures for wind power generation equipment support structures, JFESM520BTMC/W and JFESM520CTMC/W (Japanese only)** (https://www.meti.go.jp/policy/safety_security/industrial_safety/oshirase/2025/12/20251205.html)

> ***2 JFE Steel's J-TerraPlate™, Large and Heavy Steel Plate, Chosen for Wind Power Project (August 3, 2023)** (https://www.jfe-steel.co.jp/en/release/2023/230803-1.html)

SH Manufacture and Sale of Scour Prevention Materials for Offshore Wind Power Generation

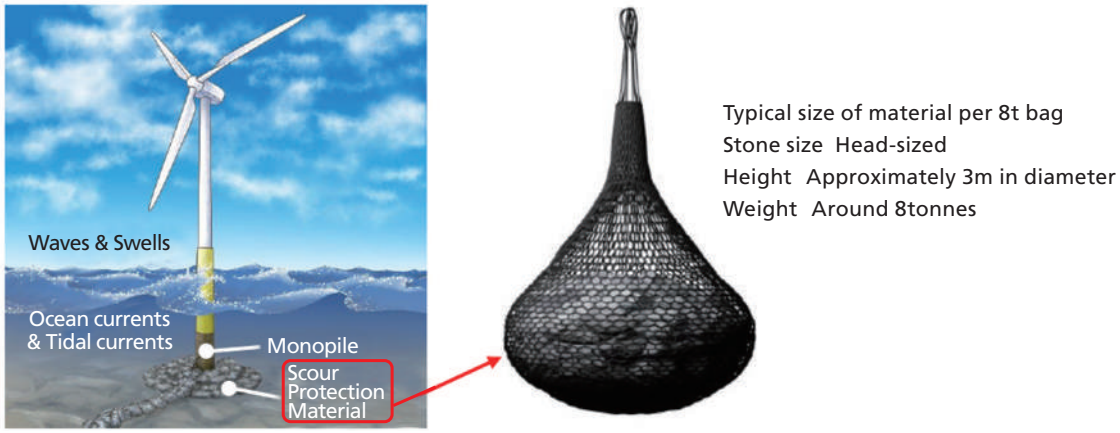
JFE Shoji established JFE Shoji Akita Offshore Materials, LTD. (JAOM), a joint venture with quarry operators, construction companies, and financial institutions in Oga City, Akita Prefecture, to manufacture and sell scour prevention materials for offshore wind power generation projects.

When monopiles are driven into the seabed for these projects, scour forms around the monopile due to waves and tidal currents, causing turbines to tilt. JAOM will base itself in Akita, where offshore wind power is expanding, to manufacture and stockpile scour prevention materials made from local natural stone and artificial stone* produced by JFE Steel, on a just-in-time basis within construction schedules.

Furthermore, the company will also pursue businesses through the expanded use of steel slag products and stone products for purposes such as forming fishing reefs and seaweed beds toward restoring the marine environment and mitigating global warming. JAOM hopes to contribute through this business to the development of Japan's offshore wind power industry and the realization of carbon neutrality and a sustainable society.

*Artificial stone manufactured by mixing steelmaking slag, a byproduct of the steelmaking process, with ground granulated blast furnace slag (a raw material for blast furnace cement) and water, then hydrating and solidifying. This artificial stone, produced by JFE Steel under the brand name Frontier Rock™, contains a high level of iron and has excellent properties for algae adhesion.

Conceptual Diagram of Scour Protection Material



SH Building a Supply Chain for the Offshore Wind Power Generation Industry

Carbon neutrality initiatives are expanding worldwide to address concerns over climate change. To achieve carbon neutrality by 2050, Japan approved the Seventh Strategic Energy Plan at a cabinet meeting in 2025, which sets targets for FY2040: a 73% reduction in greenhouse gas emissions, renewable energy accounting for 40–50% of the electricity mix, and wind power accounting for around 4–8% compared to 1.1% in FY2023.

As for offshore wind power generation, the industry is planning projects that will achieve 10 GW capacity by 2030 and 30–45 GW by 2040. Steadfast efforts are also being made to adopt a large number of internationally competitive technologies, such as the adoption of a demonstration project for a floating offshore wind power generation system under the Green Innovation Fund.

JFE Shoji is collaborating with a local enterprise that manufactures the windmill foundations in Taiwan, which is leading in the offshore wind power generation market, and has been making progress in regard to the supply chain of steel materials for foundation structures. Looking ahead, the company will capitalize on the knowledge it has acquired and contribute to the realization of carbon neutrality by establishing a supply chain that supports the domestic production of goods and the local economy while also meeting customer demand in the offshore wind power generation industry in Japan.

Eco-Products and Eco-Solutions Contributing to GHG Reduction

We provide a wide range of eco-products and eco-solutions for reducing GHG by efficiently using resources and optimizing energy use through environmentally sound technological innovations.

In addition, JFE Steel operates JFE Resolus™, a business that provides solutions to customers by leveraging its own technologies and operational improvement expertise with the aim of growing together with its customers.

ST Expanding the Supply of Steel Plates for Ammonia Tanks to Support the Energy Transition

Cumulative orders for JFE Steel's low-temperature steel plates for liquefied ammonia tanks on ships have now reached 50,000 tonnes, with the company ranking among the industry leaders in orders for these products.

Global efforts to realize a decarbonized society are advancing. Ammonia, which does not emit CO_2 when burned, offers great potential under Japan's Green Growth Strategy as a fuel for thermal power stations and ships. The use of ammonia requires the urgent establishment of a supply chain, driving increasing demand for ammonia storage tanks.

Ammonia is liquefied when it is stored and transported by sea, and liquid ammonia poses a risk of causing stress corrosion cracking in the steel plates of storage tanks. To address this risk, in 2020, JFE Steel began manufacturing ammonia-grade low-temperature steel*1 that complies with the IMO IGC Code*2 and is certified by Nippon Kaiji Kyokai (ClassNK).

JFE Steel offers a range of low-temperature steel for ammonia service, manufactured using its proprietary TMCP*3 technology to suit diverse applications and specifications*4. It has also established a manufacturing system at the plate mills in the three districts of Kurashiki, Fukuyama, and Keihin to meet increasing demand in the shipbuilding sector and further expand sales, including in new fields such as energy.

*1 As specified in Parts K and N of the ClassNK Rules for the Survey and Construction of Steel Ships (KL24B-440U, KL27-440U, KL33-440U, and KL37M-440U), fine-grained steel with an actual yield point of 440 N/mm² or less must be

*2 International Maritime Organization International Gas Carrier Code (International Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk)

*3 Thermo Mechanical Control Process. A manufacturing method that precisely controls the temperature and reduction ratio at each stage from slab heating through rolling and cooling to ensure the required material properties of the steel. It helps reduce variation in yield strength while maintaining the specified strength.

*4 Such as specifications for high heat input welding and PWHT (post weld heat treatment)



LPG and ammonia carrier

ST Development of Maintenance Technology for Ammonia Infrastructure to Support a Decarbonized Society

JFE Steel formed a consortium with IHI Corporation, Nippon Kaiji Kyokai (ClassNK), Tohoku University, and the Institute of Science Tokyo, and the consortium was selected by NEDO to participate in the Feasibility Study Program on Energy and New Environmental Technology. The consortium will promote the development of Stress Corrosion Cracking (SCC)*1 Probability Evaluation Tools for Fuel Ammonia Storage Tank and Transportation Equipment (the "Research"). The consortium's proposal to carry out the project was approved in May 2025, and an outsourcing agreement was recently concluded with NEDO.

Global efforts to realize a decarbonized society are accelerating. Ammonia, which does not emit CO_2 when burned, offers great potential under Japan's Green Growth Strategy as a low-impact fuel for thermal power stations and ships. Accordingly, the safe and rational operation of fuel ammonia storage tanks and transportation facilities is critical. However, because liquefied ammonia for storage and transportation poses SCC risks to steel surfaces, inspection and maintenance based on rational and practical risk assessments are required. Initially, the consortium will conduct a detailed study of the SCC mechanism involved in steel cracking due to the combined effects of mechanical stress and corrosion caused by liquid ammonia and use the findings to develop a prototype program to assess the likelihood of SCC simply and accurately. After the research is completed, the consortium will gather and incorporate feedback from a broad range of stakeholders on the prototype program to promote the practical adoption of risk-based maintenance*2 for fuel ammonia tank and transportation facilities, thereby helping to expand the use of fuel ammonia.

*1 Stress Corrosion Cracking: Crack formation in metal materials subjected to tensile stress in a corrosive environment

*2 Prioritizes inspection, repair, replacement, etc., based on risk assessments focused on high-risk areas, ensuring that overall risk remains within acceptable limits.

> **NEDO Feasibility Study Program** (https://www.nedo.go.jp/english/activities/activities_ZZJP_100100.html)

> **JFE Steel Launches Facility to Test Steel Materials for Liquid Ammonia Tanks** (https://www.jfe-steel.co.jp/en/release/2023/231116.html)

ST Development of High-Performance Sour Line Pipes to Support the Energy Transition

JFE Steel has developed steel material for sour line pipes*1 used to transport natural gas containing higher-than-usual concentrations of hydrogen sulfide. In recognition of this achievement, JFE Steel received the Minister of Economy, Trade and Industry Award at the 10th Monozukuri Nippon Grand Award, following its receipt of the FY2024 Okochi Memorial Production Prize.

Natural gas is an energy source that emits less CO_2 when burned, compared to coal or oil, and is regarded as an important energy source during the transition to a carbon-neutral society. At the same time, transporting natural gas containing high concentrations of hydrogen sulfide requires a high level of safety and reliability.

To minimize sulfide stress cracking*2 (SSC) and hydrogen-induced cracking*3 (HIC) in environments with high hydrogen sulfide, JFE Steel developed a surface hardness control technology, a technology for inspecting hardness across the entire surface, and a center segregation control technology. These technologies enable the stable supply of steel material for sour line pipes with a high level of safety and reliability.

Furthermore, by enhancing steel performance, these technologies achieve high durability while avoiding excessive use of alloying elements, thereby extending infrastructure service life and conserving resources.

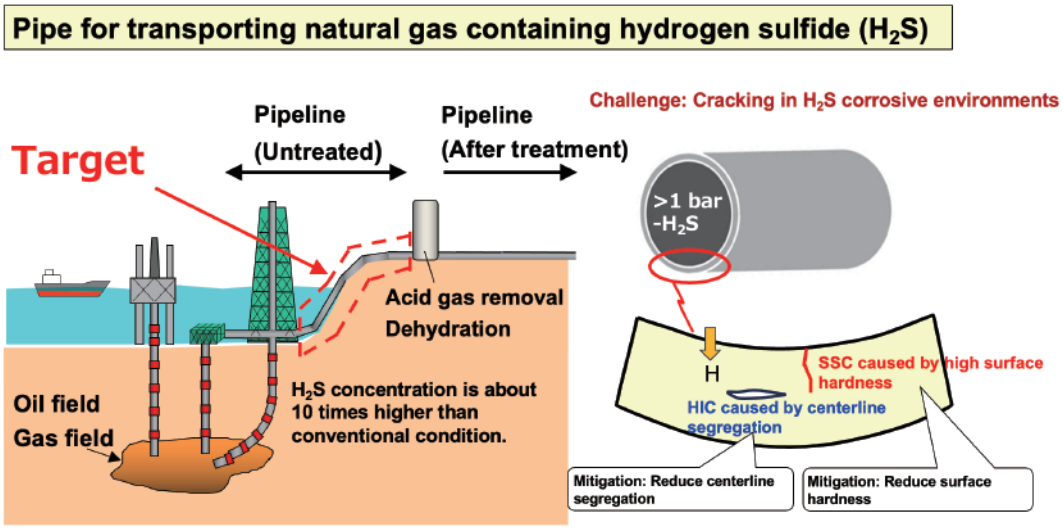
Going forward, JFE Steel will continue to contribute to the stable supply of low-carbon energy and advance the energy transition by supplying high-performance, high-quality line pipes while working to realize a sustainable society.

*1 Pipes used to transport sour gas, which is natural gas containing hydrogen sulfide.

*2 A phenomenon in which hydrogen enters into steel in a sour gas environment, degrading the steel and creating cracking when stress is applied. Higher hydrogen sulfide concentrations and applied stress increase the likelihood of cracking.

*3 A phenomenon in which hydrogen that has entered steel accumulates at inclusions such as MnS, causing cracks that propagate through areas hardened by center segregation.

Overview of a Sour Line Pipe



› **JFE Steel Receives the Minister of Economy, Trade and Industry Award at the 10th Monozukuri Nippon Grand Award: Development of Sour-Resistant Line Pipe Meeting Extremely Stringent Specifications by Reducing Center Segregation and Surface Hardness (Japanese only)** (https://www.jfe-steel.co.jp/release/2026/03/260316.html)

ST Energy-Saving Initiatives through the Development of a Radiant Tube Burner with High Thermal Efficiency and Long Service Life

Radiant tube burners are used to heat steel sheets in continuous hot-dip galvanizing and continuous-annealing lines to adjust mechanical properties such as tensile strength and elongation. Unlike direct heating burners, radiant tube burners burn fuel and air inside a metal tube, resulting in radiant heat from the tube that can be used to heat steel sheets. Since this design can help maintain the surface quality of steel sheets, JFE Steel uses the burner extensively in annealing furnaces. However, because combustion in the radiant tube burners takes place in a relatively narrow space, the tube can reach high temperatures, making deformation of the tube in the furnace a challenge. At the same time, radiant tube burners are also required to deliver high energy efficiency, so JFE Steel has worked to develop a radiant tube burner that combines long service life with energy savings.

The new radiant tube burner (see figure) uses a tube and an internal support structure designed to resist deformation in the furnace. As a result, deformation, the key indicator for burner replacement, has been limited to about one-sixth the conventional level, and service life is expected to be extended substantially. In addition, we developed technology to control the recirculating flow around the burner in accordance with the tube geometry, a gear-shaped heat transfer promoter, and a high-efficiency heat exchanger, enabling the burner to reduce fuel consumption per unit weight of steel sheet by 4.9%.

The developed radiant tube burner, which both extends service life and saves energy, is already in operation in the annealing furnaces of JFE Steel's steelworks, and JFE Steel plans to deploy it more widely in the future. In addition, JFE Steel leverages its own technologies and operational improvement expertise to offer customer solutions, including this technology, through JFE Resolus™, with the aim of growing together with its customers.

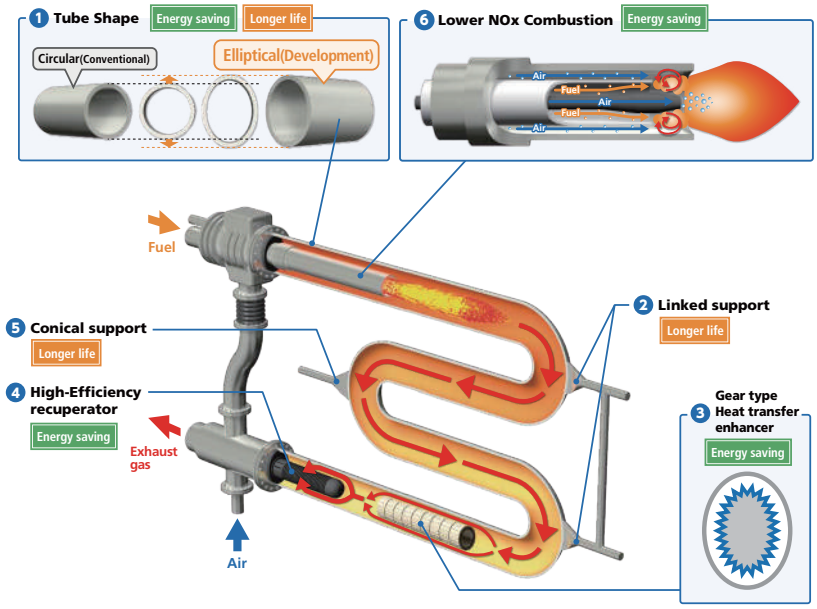
For its achievement in "Energy-Saving Initiatives through the Development of a Radiant Tube Burner with High Thermal Efficiency and Long Service Life," JFE Steel received the Minister of Economy, Trade and Industry Award, the top honor in the Energy Conservation Case Category of the FY2025 Energy Conservation Grand Prize. The Energy Conservation Grand Prize recognizes outstanding energy-saving initiatives implemented by businesses and at business sites that serve as models for others, as well as products and business models with excellent energy-saving performance. It aims to contribute to building an energy-saving society by raising awareness throughout Japan and encouraging the wider adoption of energy-saving products. The Energy Conservation Case Category covers activities that save electricity and energy at companies, factories, business sites, and other facilities. This technology also received the Excellent Presentation Award at the FY2025 Energy Conservation Grand Prize regional presentation event, which also served as the second-stage screening, as well as the FY2023 Technology Award from the Heat Transfer Society of Japan.

JFE Steel will continue to contribute to the realization of a sustainable society by further developing and commercializing energy-saving technologies.

Technologies Developed for the High-Performance Radiant Tube Burner

Key Technologies

High performance radiant tube burner



Six Key Technologies Enabling This System

Technology	Benefit	
	Energy saving	Longer life
❶Elliptical tube	Increased Radiating Surface Area	Reduced Tube Deformation
❷Linked support	—	Reduced Support Deformation
❸Gear type Heat transfer enhancer	Improved Heat Transfer Efficiency	—
❹High-Efficiency recuperator	Improved Waste Heat Recovery Efficiency,	—
❺Conical support	—	Reduced Support Deformation
❻Lower NOx Combustion	Reduced NOx Emissions through Recirculation Control	—

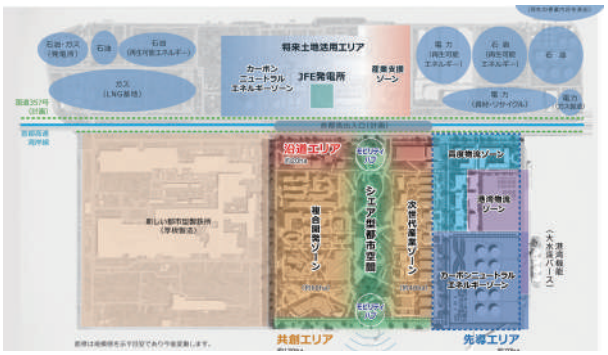
- **JFE Steel Receives the Minister of Economy, Trade and Industry Award in the Energy Conservation Case Category of the FY2025 Energy Conservation Grand Prize: Energy-Saving Initiatives through the Development of a Radiant Tube Burner with High Thermal Efficiency and Long Service Life (Japanese only)** (https://www.jfe-steel.co.jp/release/2025/12/251217-2.html)
- **JFE Steel Uses Digital Twin to Rapidly Develop Innovative Radiant Tube Burner that Achieves Extended Service Life, Fewer NOx Emissions, and Energy Savings** (https://www.jfe-steel.co.jp/en/release/2024/06/240619.html)
- **Solution Business: High Cost Performance Radiant Tube Burner** (https://www.jfe-steel.co.jp/en/products/solution/data-science/28-radiant-tube-burner.html)

Initiatives for Achieving Carbon Neutrality in the Keihin Waterfront Areas

JFE Holdings has released OHGISHIMA 2050, the JFE Group's conceptual plan for the reuse of land currently occupied by JFE Steel's East Japan Works (Keihin district), following the suspension of blast furnace operations and other upstream processes there, and in accordance with Kawasaki City's land use policy. The concept is to create fields of innovation and enterprise that will address the complex challenges involved in the pursuit of carbon neutrality. Through implementation of its OHGISHIMA 2050 plan, the JFE Group aims to convert the land for use on projects that will offer significant public benefit and help address some of the key challenges Japan faces. By attracting new industries and creating jobs that will benefit the country over the next 100 years, the JFE Group hopes to contribute to the sustainable development of local communities and society as a whole.



Rendering of the Ohgishima district, as envisioned in 2050



Land use zoning in Ohgishima

Initiatives for Developing a Hydrogen Supply Hub in the Carbon-Neutral Energy Zone

The Lead Area of the Ohgishima district has been designated as a Carbon-neutral Energy Zone, where hydrogen supply facilities will be deployed. Dramatically improved access to these facilities will support carbon neutrality and innovation across the entire district. The location has been selected as the construction site for a liquefied hydrogen receiving terminal as part of the "Commercial demonstration of Liquefied Hydrogen Supply Chain" under the Green Innovation Fund Project of NEDO, being undertaken by Japan Suiso Energy, Ltd. (JSE). A land lease agreement between JFE Steel and JSE was concluded in July 2024, the transfer of the land commenced in April 2025, and construction of the hydrogen receiving terminal began in May 2025. Preparations are steadily underway toward starting commercial demonstration operations in FY2028.

The hydrogen to be supplied in the future to Ohgishima will be used to generate green electricity at JFE's in-house power plant, which will in turn be supplied to ongoing factory operations. Surplus power will also be supplied to JSE in the leading area, advanced logistics operators, and a data center in the northern part of Ohgishima that is under consideration for joint commercialization with Mitsubishi Corporation. In addition, we also envision using hydrogen as a green fuel in the reheating furnaces of the plate mill.

Starting with Ohgishima, the JFE Group plans to play a role in building a stable, economical supply chain for hydrogen and other decarbonized fuels and to contribute to realizing carbon neutrality throughout society, including in the Keihin waterfront area.



Rendering of the hydrogen base (courtesy of Japan Suiso Energy Ltd.)



Construction at the hydrogen base (photo taken in June 2026)

Initiatives for Developing a Next-Generation Frozen and Refrigerated Logistics Hub in the Advanced Logistics Zone

On August 5, 2026, JFE Steel and GLP Japan Inc. ("GLP Japan") signed a sale and purchase agreement for approximately 18 ha of land in the Lead Area of the Ohgishima district, which will serve as the site for a large-scale, multifunctional logistics complex, focused on frozen and refrigerated storage. On the same day, JFE Holdings, JFE Steel, GLP Japan, and the City of Kawasaki signed a partnership agreement to develop an advanced logistics hub.

GLP Japan plans to develop, in phases, a group of large-scale multifunctional logistics facilities consisting of up to 11 buildings with a total floor area of approximately 370,000 m² and a frozen and refrigerated storage capacity of about 550,000 tonnes. The project aims to help address challenges facing the frozen and refrigerated logistics industry, such as aging facilities and insufficient storage capacity, while also helping to ensure a stable food supply in the Tokyo metropolitan area and strengthening cold-chain capabilities. A portion of the logistics complex is scheduled to begin operations by July 2030.

The JFE Group, GLP Japan, and the City of Kawasaki will work to enhance logistics capabilities by promoting GX and DX. They will seek to reduce environmental impact while improving logistics efficiency by conducting demonstrations and deploying technologies and initiatives such as hydrogen-powered mobility, autonomous trucks, logistics facility automation, collaborative transportation and delivery, and a modal shift leveraging the Port of Kawasaki. They will also work to strengthen the hub's capabilities as a transport base for emergency supplies during major disasters to enhance its role as part of the social infrastructure.



Rendering of the completed advanced logistics complex
(courtesy of GLP Japan Inc.)

Development of Research Facilities to Accelerate the Practical Application of Climate Tech*[1] in the Northern Part of the Minamiwatarida North District

JFE Steel and Hulic Co., Ltd. are jointly developing approximately 5.6 ha in the northern part of the Minamiwatarida North district to establish a scale-up hub envisioned by the City of Kawasaki for the practical application of climate technologies. Construction began on Research Building B in December 2025 and Research Building A in March 2026 ahead of the planned opening of the district in January 2028. The Steel Research Laboratory will occupy Research Building A, strengthening JFE Steel's R&D capabilities in areas such as GX and DX to address social challenges and contribute to greater industrial competitiveness and a sustainable society through materials technologies.

In its R&D, the laboratory will leverage data from manufacturing sites, simulation technologies, and AI to develop technologies that improve quality, ensure stable operations, increase productivity, and reduce environmental impact. The facility will also include a co-creation space designed to facilitate interaction and co-creation with companies, universities, and local stakeholders toward establishing an "open R&D hub" that accelerates the practical application of research outcomes.

Furthermore, the facility incorporates features for reducing environmental impact from the construction stage, including the use of GX steel, JGreeX™*[2] and ARCHITETSUT™*[3], a hybrid structure combining steel and wood.

Under the concept of "a one-of-a-kind industrial hub that changes the world through materials," Hulic and the JFE Group aim to create an R&D hub that generates and deploys innovations through co-creation.

*1 A general term for technologies and services designed to reduce carbon dioxide emissions and support adaptation to climate change.
*2 A proprietary JFE Steel product and registered trademark of JFE Steel in Japan. GHG emission reductions generated through JFE Steel's emission reduction technologies are allocated to designated steel products, significantly reducing the GHG emissions attributed to those products from the steelmaking process.
*3 A proprietary environmental brand and registered trademark of JFE Steel in Japan for environmentally friendly buildings combining steel frames with high seismic resistance and wood that enhances aesthetics and indoor environments.



Rendering of Research Building A



Rendering of the co-creation space



Note: The project outline and rendering reflect current plans and are subject to change. The surrounding buildings shown in the rendering are based on a city model from Vexcel Imaging US, Inc.

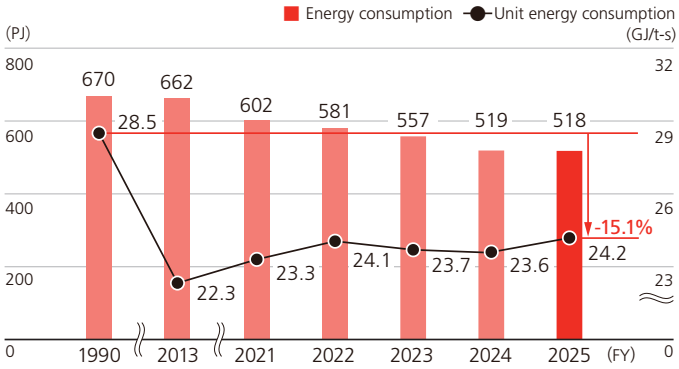
Initiatives to Reduce Energy Consumption

Reducing energy consumption is a core initiative of our response to climate change. The JFE Group is working to improve energy efficiency in our business activities and reduce GHG emissions by introducing renewable energy and optimizing facilities.

Initiatives in the Steel Business

In addition to introducing high-efficiency facilities, we have been working to reduce energy consumption in the steelmaking process by actively applying digital solutions (DS) and IoT technologies. These initiatives improve production efficiency and optimize energy use, representing important steps toward building a sustainable manufacturing framework. Going forward, we will continue pursuing technological innovation and on-site improvement to further enhance energy efficiency.

Energy Consumption and Unit Energy Consumption of JFE Steel



Note: FY2013 figure includes data for the Sendai Works of JFE Bars & Shapes Corporation.

ST Fuel and Power Operation Guidance System for Steelworks

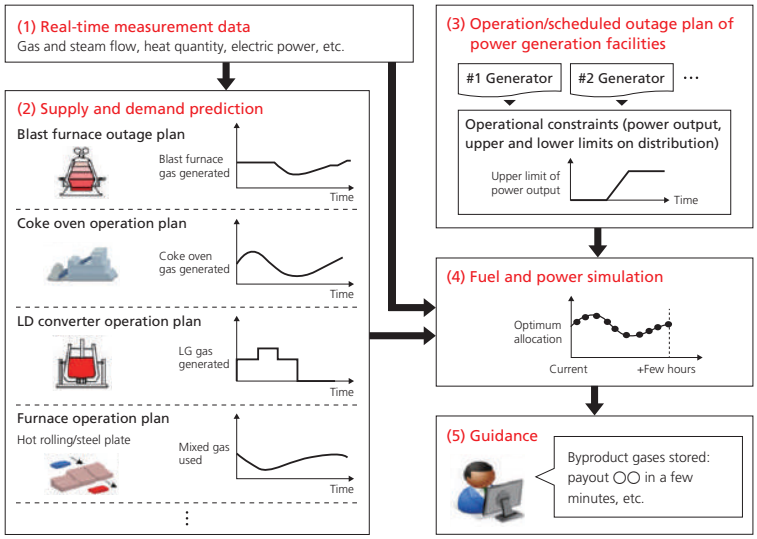
JFE Steel developed a fuel and power operation guidance system for steelworks and succeeded in saving energy and reducing CO_2 as well as fuel and power costs by optimizing the fuel, steam, and electric power used in the steelmaking process.

Previously, operators determined various factors such as the distribution of byproduct gas to each process, amount of fuel (heavy oil, city gas, etc.) and electricity to purchase, and the amount of byproduct gas stored, taking into account energy demand and supply (amount generated and used) as well as the operating conditions of power generation facilities, to minimize cost and energy loss. However, it was difficult to use this method to accurately estimate the change in energy demand and supply. The guidance system developed by JFE Steel uses voluminous real-time measurement data (1) obtained through a cyber physical system (CPS)* and the precise production plans of each factory to predict future demand and supply with high accuracy (2), and by taking into account information such as in-house power generation capacity (3), fuel and power simulation allows for the calculation of the optimal operating conditions with the lowest possible purchases from external sources (4), and the results are fed back to guide the operator (5).

The system's development was awarded the Academic Award (Technical Division) of the 2022 Japan Institute of Energy Award. JFE Steel established the JFE Digital Transformation Center (JDXC™) to promote CPS within the manufacturing process and other digital transformation initiatives to achieve innovative production improvements as well as stable operations. We remain committed to realizing a sustainable society by adopting digital transformation to address the various issues identified at production sites.

*A system that brings together a vast amount of sensor information about physical space as big data in cyberspace and generates value by feeding back in real time the results analyzed by various measures for application in the physical space.

Guidance System Overview



› **JFE Steel receives Academic Award (Technical Division) of the 2022 Japan Institute of Energy Award (Japanese only)**
(https://www.jfe-steel.co.jp/release/2023/03/230301.html)

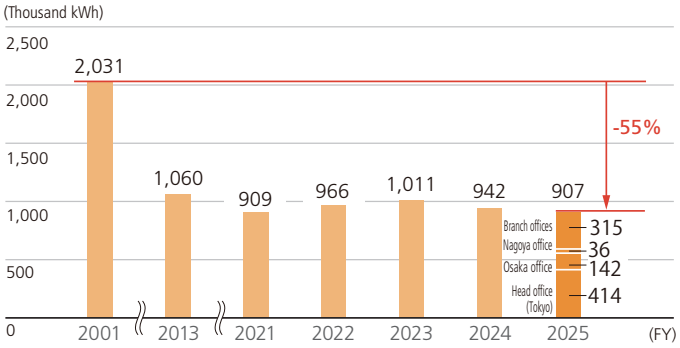
Initiatives in the Trading Business

Under the environmental policy revised in 2025, JFE Shoji is continuously implementing initiatives to reduce paper and electricity consumption and strictly manage waste separation as part of its energy reduction efforts.

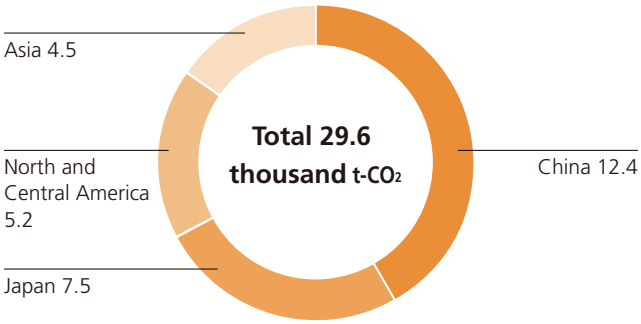
In terms of reducing paper consumption, the company continues to use recycled paper and we ensure that documents are printed in N-up layout using both sides of the paper. We are also promoting paperless meetings through the use of large monitors and web conferencing systems. Consequently, the amount of paper used per employee is decreasing. As for electricity consumption, JFE Shoji is reducing its environmental impact through measures such as replacing fluorescent lights with LEDs, introducing motion-sensor lighting and energy-saving equipment, implementing leave-on-time days, and improving operational efficiencies through robotic process automation (RPA).

Furthermore, the company has set a new goal for its domestic operating companies to reduce CO_2 emissions by installing solar panels and purchasing electricity derived from renewable energy sources. In FY2025, in addition to a decline in emission factors, the domestic operating companies acquired non-fossil certificates through the full-scale operation of off-site PPAs and procured electricity derived from renewable energy, reducing CO_2 emissions by 36.6% compared to FY2019.

Electric Power Consumption by JFE Shoji



GHG Emissions of the JFE Shoji Group



Data cover: JFE Shoji and 59 affiliates in Japan and overseas

For quantitative data for the JFE Shoji Group's GHG emissions, please refer to:

› **Environmental Data** (P. 273)

Policy Engagement

Basic Approach to Policy Engagement on Climate Change Issues

The JFE Group has identified climate change as a top priority and formulated both the JFE Group Environmental Vision for 2050 to achieve carbon neutrality by 2050 and its long-term JFE Vision 2035. To realize these aspirations, JFE Steel is focusing on the early implementation of ultra-innovative technologies and expanding the supply of GX steel JGreeX™. However, long-term technology development, investment in the construction of large-scale decarbonization infrastructure, and ensuring investment predictability by creating demand for GX steel and other Green Transformation (GX) products require bold and powerful industrial policies from the government as well as collaboration with society, including stakeholders. We therefore actively recommend policies through the Company and related organizations and disclose the results of our lobbying activities.

In particular, JFE Steel not only seeks to enhance corporate value but also contributes to the realization of carbon neutrality, which in turn will contribute to sustainable development worldwide. Accordingly, the Company makes recommendations regarding Japan's climate change policies as well as GX and energy policies, taking into account the Paris Agreement, and proactively engages in and contributes to activities through industry associations.

In addition, each Group company participating in industry associations and initiatives regularly reviews the Group's thinking, direction, stance, and influence and puts forward its views or reviews its participation if there are differences with the stance of industry associations and other organizations. Matters requiring key decisions are discussed by the Group Management Strategy Committee and then submitted to the Board of Directors for deliberation and decision.

Stance on Major Policies

The JFE Group views government GX as a key framework for realizing a sustainable society. We support the GX2040 Vision and are developing our business activities and environmental strategies in alignment with the directions of these policies. Our stance on GX policies and specific initiatives are described below.

GX Policies

The government's GX2040 Vision presents long-term directions and policy guidelines to enhance investment predictability for GX as a national strategy toward achieving both a decarbonized society and industrial development.

In the steel business, bold and powerful government support is required for long-term technology development, increased operating costs associated with process transitions, and infrastructure development to meet higher electricity demand.

Also essential are support systems for building hydrogen and ammonia supply chains as decarbonized fuel infrastructure, promoting CCUS, and creating markets that properly value GX products, such as GX steel. We will strive Companywide and through industry associations to recommend policies and promote public understanding to ensure the directions set forth in this vision are advanced as concrete policies.

Energy Policy

The principle of "S+3E" in the government's 7th Strategic Energy Plan stands for safety as a major premise, energy security as the highest priority, and improvement of economic efficiency and compatibility with the environment, in concert with policies calling for the transition of renewable energy into a mainstay power source and for maximizing the use of nuclear power.

The reduction of byproduct gas previously used as an energy source will significantly boost electricity demand in the steel business's decarbonization efforts, particularly in process transitions at integrated blast furnace steelworks. Therefore, the stable, medium- to long-term supply of decarbonized power, realization of internationally competitive industrial electricity prices, and the development and rebuilding of transmission infrastructure will be essential. The construction of hydrogen and ammonia supply chains as decarbonized fuel infrastructure is also necessary. We will work Companywide and through industry associations to recommend policies and promote public understanding to ensure that concrete policies are advanced in line with this plan.

Carbon Pricing

Under the government's growth-oriented carbon pricing scheme, the government has decided to launch the emissions trading system (GX-ETS) in FY2026 and introduce a fossil fuel surcharge system in FY2028. Under this policy package, the three pillars are the issuance of GX Economic Transition Bonds, the introduction of carbon pricing, and the use of new financing methods, and the government is committed to large-scale support for technology development and capital investment for decarbonization. We support this policy that encourages taking on the challenge of developing innovative technologies for carbon neutrality.

We will make the necessary policy recommendations as a company or through industry associations based on this scheme to help ensure the introduction of effective systems for developing and implementing innovative technologies in the Japanese steel industry while maintaining and enhancing international competitiveness. In addition, we believe that ensuring investment predictability for GX requires that both the introduction of carbon pricing and policies to create markets for GX products proceed in tandem.

Creation of GX Product Markets

GX products arising from the transition to decarbonized processes (products with reduced GHG emissions over their life cycle through decarbonization investments) typically carry higher costs, so it is unlikely that demand will spontaneously emerge through market forces alone. It is essential to create a market environment that recognizes GX value throughout society and mechanisms that ensure that GX value is recognized throughout the supply chain. To create such demand, the public and private sectors must jointly advance specific initiatives such as visualizing GX value and active procurement of GX products and services.

For the steel industry in particular, from the perspective of ensuring the necessary investment predictability for decarbonization, the actual emission reductions from the steelmakers' own efforts must be understood and recognized as GX value (visualizing GX value), which in turn will depend upon promoting understanding and creating transparent and reliable communication guidelines. It is also important to promote mechanisms that recognize the procurement of GX products and the use of public procurement (active procurement of GX products and services). JFE Steel is recommending policies and raising public awareness to ensure the advance of concrete initiatives by both the public and private sectors to expand GX product markets while also actively participating in rule and standard-setting efforts in domestic and international industry associations and global initiatives.

Initiatives to Materialize Demand Creation Measures

The March 2024 Interim Summary of the Study Group on GX Product Markets for Demand Creation Contributing to Industrial Competitiveness Enhancement and Emission Reduction*1 and the January 2025 Consolidated Summary of the Study Group on Green Steel for Green Transformation*2 clarify the government's policy direction of providing priority support for and using products that incorporate the costs of decarbonization investment, such as GX steel*3.

Specifically, beginning in FY2025, these policies were reflected in the criteria for products subject to preferential procurement under the Act on Promoting Green Procurement and in the criteria for additional subsidies to promote the introduction of clean energy vehicles. From FY2026, in addition to conducting pilot public works projects using GX steel, the government has introduced policies to support the formation of the GX steel market in sectors with substantial demand. These include the Ministry of the Environment's support program for new ZEB construction using low-carbon building materials, and the Ministry of Land, Infrastructure, Transport and Tourism and the Ministry of the Environment's support program for the introduction of zero-emission and other vessels.

In addition, as a result of activities in the Rules Working Group of the GX League in which JFE Steel participated, a framework for the GX Acceleration Declaration*4 was launched, whereby companies voluntarily declare their procurement of GX products and the content of their declarations is disclosed and evaluated. Based on this initiative, JFE Steel has declared its procurement of GX products and is actively promoting the creation of private sector demand as well.

> ***1 METI: Interim Summary of the Study Group on GX Product Markets for Demand Creation Contributing to Industrial Competitiveness Enhancement and Emission Reduction (Japanese only)** (https://www.meti.go.jp/shingikai/energy_environment/gx_product/20240326_report.html)

> ***2 METI: Consolidated Summary of the Study Group on Green Steel for Green Transformation** (https://www.meti.go.jp/english/press/2025/0123_001.html)

> ***3 Initiatives to Develop the GX Steel Market through GX Steel JGreeX™** (P. 60)

***4 GX Acceleration Declaration**

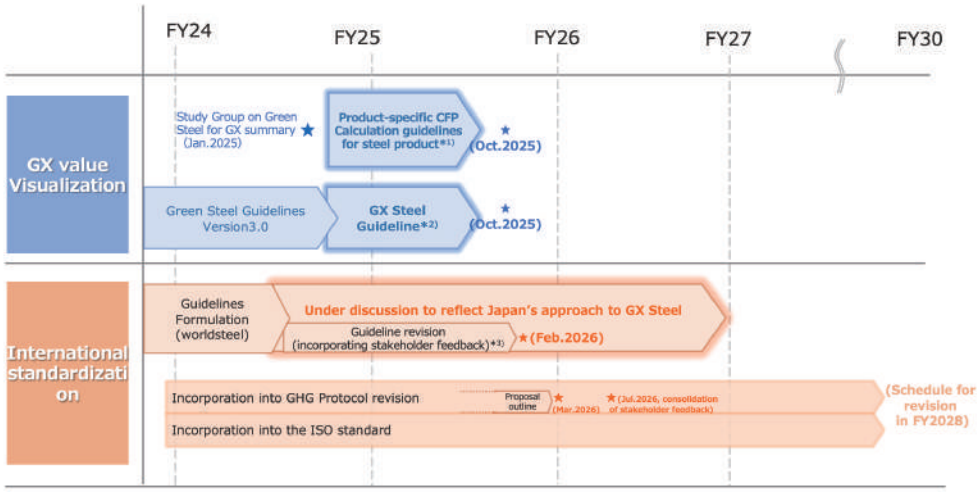
> **METI: GX Acceleration Declaration Framework Newly Launched as Effort to Encourage Companies Proactively Engaging in Creation of a Market for GX** (https://www.meti.go.jp/english/press/2024/1206_001.html)

> **JFE Steel GX Acceleration Declaration (Japanese only)** (https://www.jfe-steel.co.jp/release/2024/12/241220-3.html)

Initiatives for Setting Rules and Standards in Japan and Overseas

In October 2025, the Japan Iron and Steel Federation (JISF) took the lead globally by formulating and publishing Guidelines for Calculating Product Carbon Footprint for Steel Products*1 and GX Steel Guidelines*2 that reflect the value of GHG emission reductions. At the World Steel Association, guidelines on steel products using the Chain of Custody*3 approaches were also revised incorporating third-party feedback and published based on the JISF guidelines. In March 2026, the Institute of Life Cycle Assessment, Japan, also formulated guidelines for actual GHG emission reductions*4. Guidelines for Calculating the Carbon Footprint of Non-Fossil-Powered Steel*5 have been formulated, although these products do not qualify as GX steel. JFE Steel actively participates in and promotes rulemaking in these industry organizations.

In addition, the development of standards is also progressing at international organizations such as the International Organization for Standardization (ISO) and the GHG Protocol, and JFE Steel is involved either on its own behalf or through industry associations.



> ***1 Guidelines for Product-Specific CFP Calculation for Steel Products (Japanese only)**
(https://www.jisf.or.jp/business/ondanka/kouken/greensteel/documents/steelcfpguideline_final.pdf)

> ***2 Japan Iron and Steel Federation: GX Steel Guidelines (formerly Guidelines on Green Steel) (Japanese only)**
(https://www.jisf.or.jp/business/ondanka/kouken/greensteel/documents/GXSteelGuideline_v4.1.pdf)

> ***3 A framework for tracking and recording how products and raw materials move and are managed through the supply chain. World Steel Association: GHG accounting using chain of custody approaches** (https://worldsteel.org/climate-action/chain-of-custody/)

> ***4 Guidelines for Actual Greenhouse Gas Emission Reductions by the Institute of Life Cycle Assessment, Japan (Japanese only)**
(https://www.ilcaj.org/assets/doc/kenkyukai/02/guideline.pdf)

> ***5 Guidelines for Calculating the Carbon Footprint of Non-Fossil-Powered Steel (Japanese only)**
(https://www.jisf.or.jp/business/ondanka/kouken/greensteel/documents/Non-FossilPoweredSteelGuidelinev1.1.pdf)

Lobbying Activities and Outcomes

The JFE Group is contributing to the realization of a carbon-neutral society by advancing the development of ultra-innovative technologies and the transformation of the steelmaking process. At the same time, it is actively engaging in policy formation to enhance the sustainability of society as a whole. In particular, we aim to accelerate decarbonization while maintaining industrial competitiveness through constructive lobbying efforts that reflect the realities of the industry regarding national strategies such as GX and energy policies and by ensuring their inclusion in institutional design.

Specific outcomes of these activities include the incorporation of the Group's recommendations into policies such as the GX2040 Vision and the 7th Strategic Energy Plan, as well as the receipt of government support such as subsidies for capital investment and research and development supporting the social implementation of innovative technologies. We also regard these initiatives as part of our social responsibility that extends beyond corporate boundaries, contributing to the building of a sustainable future.

Public Policy Engagement and Outcomes

The role of companies in realizing a sustainable society goes beyond business activities alone. As a member of the industrial sector, the JFE Group is actively involved in policy formation that contributes to the construction of a decarbonized society and actively engages in policy advocacy to promote effective institutional design.

Study Group on Green Steel for GX

At the 3rd meeting of the Study Group on Green Steel for GX, hosted by the Ministry of Economy, Trade and Industry in November 2024, Hiroyuki Tezuka, Fellow of JFE Steel, spoke about the necessity of green steel, the status of formulating green steel guidelines in Japan and the World Steel Association, and policy advocacy activities at COP29 and other forums. He also introduced the status of rulemaking for the dissemination of green steel and emphasized the importance of assigning environmental value to emission reductions during the carbon-neutral transition period.

As a result of these proposals, the summary of the Study Group clarified the definition of "Green Steel for GX" and confirmed the government's policy to prioritize measures such as preferential procurement and purchasing support for steel products that reflect the value of emission reductions in the steelmaking process.

> **3rd Meeting of the Study Group on Green Steel for Green Transformation (November 25, 2024) (Japanese only)**
(https://www.meti.go.jp/shingikai/mono_info_service/green_steel/pdf/003_04_00.pdf)

Expert Working Group on Carbon Pricing toward GX

At the first meeting of the Expert Working Group on Carbon Pricing toward GX held in September 2024, Hiroyuki Tezuka, Fellow of JFE Steel, expressed his views on the design of GX-ETS reflecting the realities of the steel industry. He explained the industry's characteristics, including its high marginal abatement costs and the need for long-term technology development, and emphasized the need to maintain international competitiveness and the importance of creating a market for GX products.

Based on this working group's review of the issues, the detailed design of GX-ETS reflects the importance of taking sector characteristics into account in system design and avoiding excessive burdens during the transition period. In addition, system design to encourage GX investment and consideration of medium- to long-term investment funding were identified as factors to be considered in allocating emission allowances. The steel industry's positions are thus reflected in the direction of system design.

› **Explanation Materials by The Japan Iron and Steel Federation — Expert Working Group on Carbon Pricing toward GX (1st Meeting) (Japanese only)** (https://www.cas.go.jp/jp/seisaku/gx_jikkou_kaigi/carbon_pricing_wg/dai1/siryou4.pdf)

56th Meeting of the Advisory Committee for Natural Resources and Energy's Strategic Policy Subcommittee

The 56th Meeting of the Advisory Committee for Natural Resources and Energy's Strategic Policy Subcommittee was held on June 6, 2024 toward formulating Japan's 7th Strategic Energy Plan. At this meeting, JFE Holdings' President Kitano gave a presentation entitled Energy Policy to Help JFE Steel Achieve Decarbonization, during which he recommended policies to promote the use of GX steel products and energy policies to reduce uncertainty in the business environment related to GX.

The president announced a plan to make an investment decision during FY2024, assuming government support, on the process conversion to an innovative electric arc furnace under consideration at the Kurashiki district of the West Japan Works of JFE Steel, and expressed the intention to build a mass production system for high-quality, high-function GX steel products that could not be produced with conventional electric arc furnaces. He also emphasized that policies to promote the use of GX steel products are indispensable for Japanese manufacturing to enhance its international competitiveness in this area, in addition to measures supporting capital investment and operating costs. Challenges include the development and reconstruction of transmission infrastructure, establishing a stable supply system for decarbonized power sources, and developing a supply infrastructure for non-fossil fuels such as hydrogen and ammonia. He called for the government to proactively deploy policies and promote decarbonization as a national GX strategy to seize this opportunity to revitalize the Japanese economy.

These recommendations were confirmed to have influenced policy formulation, as the aforementioned GX2040 Vision and the 7th Strategic Energy Plan, both approved by the Cabinet in February 2025, explicitly stated the necessity of securing electricity supply capacity and strengthening power grids (including intra-regional trunk systems), developing supply infrastructure for non-fossil fuels, and promoting policies for introducing decarbonization technologies.

› **Agency for Natural Resources and Energy: 56th Meeting of the Advisory Committee for Natural Resources and Energy's Strategic Policy Subcommittee (Japanese only)** (https://www.enecho.meti.go.jp/committee/council/basic_policy_subcommittee/2024/056/)

The 8th GX Implementation Council

In February 2023, the cabinet approved the Basic Policy for the Realization of GX to simultaneously achieve three goals through GX: decarbonization, stable energy supply, and economic growth. In July of the same year, the cabinet also approved the Strategy for Promoting Structural Transition based on Decarbonization (GX Promotion Strategy). The growth-oriented Carbon Pricing (CP) Concept is the decarbonization initiative based on this strategy and is currently being actively pursued toward its realization and implementation.

At the 8th GX Implementation Council, held in November 2023, JFE Steel's President Kitano (then-Chairman of the Japan Iron and Steel Federation) explained the efforts being made by the Japanese steel industry to achieve carbon neutrality, and he called for long-term government support measures comparable to the support provided by the governments in Europe, the U.S., and China for the huge research and development and capital investment costs. He also expressed the need for long-term government support for converting to innovative processes and dealing with the increase in operational costs for non-fossil fuels, electricity, and other sources, as well as actions for stimulating demand for GX steel materials with high environmental value through, for example, public procurement, measures to ensure the international competitiveness of industrial electricity prices, and support for building new infrastructure, including a hydrogen supply chain and a CCS scheme.

These recommendations were reflected in the GX2040 Vision, approved by the cabinet in February 2025, in the form of visualizing GX value and active procurement of GX products and services, and they were positioned as concrete policies encouraging the formation of GX markets. The vision also clearly stated that measures to promote GX investment will be advanced for hard-to-abate, high-emission industries such as steel, including conversion to innovative electric arc furnaces and introduction of steelmaking processes utilizing hydrogen.

› **Cabinet Secretariat: the 8th GX Implementation Council (Japanese only)** (https://www.cas.go.jp/jp/seisaku/gx_jikkou_kaigi/dai8/index.html)

Overview of Government Support

Efforts to achieve carbon neutrality require both the research and development of innovative technologies and large-scale capital investment, which are beyond the capacity of companies to pursue on their own. The JFE Group is actively using policy support frameworks established under Japan's GX initiatives to accelerate decarbonization.

Adoption under the Energy and Manufacturing Process Conversion Support Program for Industries in a Hard-to-Abate Sector

Realizing a carbon-neutral society in Japan while also reviving economic growth will depend upon reliably linking research and development outcomes to domestic capital investment. In particular, the practical application of decarbonization technologies in the steel industry requires massive investment accompanied by process conversion, without prospects for increased revenue through higher production volumes. For this reason, we have repeatedly emphasized the extreme difficulty for private companies to make such investment decisions on their own.

In light of this, the government established the Energy and Manufacturing Process Conversion Support Program for Hard-to-Abate Sectors Industries to subsidize a portion of the capital investment required for fuel conversion in in-house power generation facilities and the conversion of manufacturing processes that meet requirements such as CO_2 reduction effects, in industries such as steel, chemicals, paper and pulp, and cement. This program uses GX transition bonds and aims to support both the practical realization of carbon neutrality and the strengthening of industrial competitiveness.

In addition, the tax credit for promoting domestic production in strategic sectors was introduced to promote domestic production in strategically important industries, including GX. The system is intended to enhance industrial competitiveness by providing tax credits to support fields such as GX steel, where initial investment as well as production and sales costs are high.
In regard to the innovative electric arc furnace (high-efficiency, large-scale electric arc furnace) that we had been considering for introduction at the Kurashiki district of the West Japan Works during the transition period toward carbon neutrality, our project was selected under the process conversion support program on December 20, 2024, and we formally decided to introduce the furnace following the subsidy grant decision on April 9, 2025. In addition to the innovative electric arc furnace, new installations will include secondary refining equipment, cold iron source logistics facilities, wharf development, and power receiving and distribution facilities. The total investment will amount to 329.4 billion yen, with government support capped at 104.5 billion yen. We plan to commence production in the first quarter of FY2028 and will promptly advance construction of the innovative electric arc furnace. Furthermore, we will enhance our supply capacity for GX steel and strive to achieve both emission reductions and business growth by also using the support of the tax credit for promoting domestic production in strategic sectors.

Adoption Status for the Green Innovation Fund Projects

The JFE Group is fully leveraging the New Energy and Industrial Technology Development Organization (NEDO)'s Green Innovation Fund project, and we are conducting research and development in collaboration with other companies in the industry toward realizing carbon neutrality. JFE Steel is working on a NEDO project called Utilizing Hydrogen in Steelmaking Processes (GREINS), while JFE Engineering is focusing on carbon neutrality in the material cycles and waste management sector as well as on lowering the cost of offshore wind power generation.

Utilizing Hydrogen in Steelmaking Processes (GREINS)

JFE Steel formed a consortium with Nippon Steel Corporation, Kobe Steel, Ltd., and the Japan Research and Development Center for Metals and was jointly commissioned to undertake the Utilizing Hydrogen in Steelmaking Processes (GREINS) project to achieve progress toward carbon neutrality by 2050. The four companies involved are receiving a total of approximately 439.2 billion yen of financial support.

> **Green Innovation Fund Project "Hydrogen Utilization in Iron and Steelmaking Processes": Research and Development and Social Implementation Plan (March 10, 2026) (Japanese only)** (https://www.meti.go.jp/policy/energy_environment/global_warming/gifund/gif_05_randd_3r.pdf)

Carbon-Recycling Pilot Blast Furnaces

By developing low-carbon technologies using externally sourced hydrogen and CO_2 contained in blast furnace exhaust gas and combining these technologies with other low-carbon techniques, such as using biomass and direct-reduced iron as raw materials, we will demonstrate technologies that achieve a reduction of 50% or more in CO_2 emissions from the blast furnace steelmaking process by 2030 through the use of medium-scale test blast furnaces, which are at least one-fifth the size of a full-scale furnace. JFE Steel is in charge of developing carbon recycling blast furnace operation technology and elemental technology as well as overall process evaluation and review, and in May 2025, a small-scale test blast furnace was fired up, and testing is ongoing.

- Project scale: Approx. 285.3 billion yen*1, Financial support scale: Approx. 238.6 billion yen*2 (total for the four companies)

*1 Project scale based on the level of financial support and subsidy rate.
*2 This includes incentives and is subject to change depending on project progress and other factors at each stage gate.

Direct Hydrogen Reduction Compact Bench Pilot Furnace

In the area of developing direct hydrogen reduction technology, we intend to demonstrate a technology for directly reducing low-grade iron ore with hydrogen in medium-scale direct reduction furnaces, which are at least one-fifth the size of a full-size furnace, to achieve a reduction in CO_2 emissions of 50% or more, compared to the current blast furnace method, by 2030. JFE Steel is in charge of examining operational fluctuations and wide-ranging methanation reaction characteristics using the new bench pilot furnace, investigating gas composition that suppresses reduction pulverization and clustering while achieving a high reduction rate, evaluating the microstructure using high-precision equipment, determining gas composition, the gangue content of direct-reduced iron and carbon addition levels, and optimizing shape and forming. The bench pilot furnace, with a production capacity of 15 kg/h, began operation in December 2024 and continues to undergo testing. The tests have successfully produced direct-reduced iron continuously from low-grade pellets using 100% hydrogen. Furthermore, from June to July 2026, hydrogen-reduction testing using green hydrogen was conducted in the bench pilot furnace, successfully producing about one tonne of direct-reduced iron for the first time in Japan. The tests also demonstrated that direct-reduced iron could be stably produced through the consistent reduction of low-grade pellets using green hydrogen.

- Project scale: Approx. 136.9 billion yen*1, Financial support scale: Approx. 114.1 billion yen*2 (total amount for the three companies)

*1 Project scale based on the level of financial support and subsidy rate.
*2 This includes incentives and is subject to change depending on project progress and other factors at each stage gate.

- **NEDO: A new research focus under the Green Innovation Fund Project: Hydrogen Utilization in Iron and Steelmaking Processes (Japanese only)** (https://www.nedo.go.jp/news/press/AA5_101738.html)
- **NEDO: Hydrogen Utilization in Iron and Steelmaking Processes** (https://green-innovation.nedo.go.jp/en/project/utilization-hydrogen-steelmaking/)
- **Consortium of the Green Innovation Fund Project: Utilizing Hydrogen in the Steelmaking Process** (https://www.greins.jp/en/)
- **Japan's First Successful Production of Direct-Reduced Iron Using Green Hydrogen (Japanese only)** (https://www.jfe-steel.co.jp/release/2026/07/260731.html)

Pilot Electric Arc Furnaces

In a project for developing impurity removal technology for electric arc furnaces using direct-reduced iron, demonstrations of a large-scale integrated electric arc furnace process (processing capacity of approximately 300 tonnes) will be conducted by 2030 to verify its control of the concentration of impurities (components affecting the product) to the same level as standard blast furnace methods (phosphorus 150 ppm, nitrogen 40 ppm or less), toward the goal of manufacturing high-grade steel suitable for car body panels and other components with the hydrogen-based direct-reduced iron made from low-grade iron ore. JFE Steel is in charge of evaluating and examining the new heat sources and cold iron source preheating using a small-scale test electric arc furnace with a capacity of 10 tonnes and developing technologies for dephosphorization and denitrification of molten steel using a secondary refining furnace with a capacity of 3 tonnes. The small-scale pilot electric arc furnace began operation in February 2025. Development progress and results were evaluated in the FY2025 stage-gate review, and NEDO approved the project's continuation. We will continue development toward the practical application of technology for manufacturing high-quality steel.

- Project scale: Approx. 40.4 billion yen*1, Financial support scale: Approx. 30.6 billion yen*2 (total for the four companies)

*1 Project scale is calculated based on the level of financial support and subsidy rate.
*2 This includes incentives and is subject to change depending on project progress and other factors at each stage gate.

Carbon Neutrality in the Material Cycles and Waste Management Sector

A project titled "Achieving Carbon Neutrality in Waste and Resource Circulation" is underway as part of the Green Innovation Fund project administered by the New Energy and Industrial Technology Development Organization (NEDO). According to NEDO, this project is intended to minimize atmospheric emissions of carbon dioxide, methane, and other gases from waste incineration and landfill disposal, and to stably and efficiently recover carbon from waste to achieve net zero GHG emissions. It also involves development and demonstration for realizing a carbon-neutral carbon circulation system that circulates and supplies biomass-derived carbon as an industrial resource, with the goal of creating a model for social implementation.

JFE Engineering was selected for NEDO's Green Innovation Fund Project, "Achieving Carbon Neutrality in Waste and Resource Circulation," for which proposals were invited in February 2024, and it is conducting small-scale furnace demonstration testing as a commissioned project.

For details on this project, please refer to:
- **Development of a Waste Chemical Recycling Technology through the Use of the Green Innovation Fund** (P. 135)

Efforts to Lower the Cost of Offshore Wind Power Generation

A project titled "Cost Reductions for Offshore Wind Power Generation" is underway as part of the Green Innovation Fund project administered by NEDO. According to NEDO, the aim is to achieve early cost reductions, primarily in floating offshore wind power generation, and to promote wider introduction, drawing on knowledge gained from this project and previous demonstration initiatives.

Through the consortium in which it participates, JFE Engineering jointly proposed and was selected for NEDO's Green Innovation Fund Project/Cost Reductions for Offshore Wind Power Generation/Floating Offshore Wind Power Demonstration Project (Phase 2) under the theme "Southern Akita Floating Offshore Wind Demonstration Project Aimed at Overseas Expansion via Cost Reductions."

For further details, please refer to:
› **Demonstration Research on Cost Reduction for Floating Offshore Wind Power Generation** (P. 78)

Funding Methods through Green/Transition Finance

JFE Holdings has established the Green/Transition Finance Framework and issued transition bonds through a public offering in 2022. It was the first Japanese manufacturer to be selected as a model case under METI's Transition Finance Model Projects in FY2021. Achieving carbon neutrality will require significant, long-term investments in capital and R&D. JFE Holdings will continue to leverage transition financing and diversify its funding methods.

Formulated the Technology Roadmap for Transition Finance in the Iron and Steel Sector

The technology roadmap for Transition Finance toward decarbonization in the iron and steel sector, published by the Japanese Ministry of Economy, Trade, and Industry (METI), outlines a path for accelerating decarbonization and achieving carbon neutrality by introducing innovative technologies from the 2040s onward, assuming that social infrastructure such as hydrogen supply and CCUS is in place. In the process of drawing up this roadmap, JFE Steel's Fellow, Hiroyuki Tezuka, Chairman of the Japan Iron and Steel Federation's Energy Technology Committee, participated as a specialist in the task force formulating the roadmap. The roadmap is aligned with Japan's nationally determined contribution (NDC) based on the Paris Agreement and is therefore aligned with the agreement.

Green/Transition Finance Framework

The JFE Group developed this framework based on the "Green Bond Principles 2021" of the International Capital Market Association (ICMA), the "Green Loan Principles 2023" of the Loan Market Association (LMA), the Asia Pacific Loan Market Association (APLMA), the Loan Syndication & Trading Association (LSTA), the "Green Bond Guidelines (2022)," the "Green Loan Guidelines (2022)" of the Ministry of the Environment, the "Climate Transition Finance Handbook 2023" of the ICMA, and the "Basic Guidelines on Climate Transition Finance (May 2021)" of the Financial Services Agency, the Ministry of Economy, Trade and Industry, and the Ministry of the Environment. Since our initiatives have been certified by a third-party organization as being aligned with METI's roadmap, they are also aligned with the Paris Agreement.

› **METI: Technology Roadmap for Transition Finance in the Iron and Steel Sector**
(https://www.meti.go.jp/english/policy/energy_environment/transition_finance/index.html)

› **METI: Transition Finance Case Study**
(https://www.meti.go.jp/policy/energy_environment/global_warming/transition/transition_finance_case_study_jfehd_eng.pdf)

› **Green/Transition Finance Framework (Japanese only)**
(https://www.jfe-holdings.co.jp/common/pdf/sustainability/environment/climate/Framework_for_Green_and_Transition_Finance.pdf)

› **Transition Finance Report—Funds Raised, Allocated, and Their Impact (Japanese only)**
(https://www.jfe-holdings.co.jp/common/pdf/sustainability/environment/climate/impact_report_2024.pdf)

Participation in External Initiatives

The JFE Group is taking responsible action toward realizing a sustainable society in response to global environmental issues such as climate change. As part of this effort, we are actively participating in major domestic and international initiatives, enhancing our ability to respond to climate change through the sharing of knowledge and collaboration. The following are the main initiatives in which we participate.

Engagement with the GX Acceleration Agency

The GX Acceleration Agency is a certified corporation established with approval granted in April 2024 by the Ministry of Economy, Trade and Industry, as stipulated in the Act on Promoting a Smooth Transition to a Decarbonized Growth-oriented Economic Structure. To help realize GX investment of over 150 trillion yen over the next 10 years, the GX Acceleration Agency is responsible for financial support, including debt guarantees, operating a carbon emissions trading system, and collecting fossil fuel surcharges.

JFE Holdings supported the purpose of establishing the GX Acceleration Agency and invested in the GX Acceleration Agency at the time of its establishment. The JFE Group also actively contributes to the advancement of GX in Japan through dialogue with the agency and use of its various programs.

In 2026, JFE Holdings entered into a transition loan agreement backed by the GX Acceleration Agency's debt guarantee program for investment in the innovative electric arc furnace (high-efficiency, large-scale electric arc furnace) to be introduced at JFE Steel's West Japan Works (Kurashiki district). The GX Acceleration Agency chose to support the project with the expectation it would both significantly reduce GHG emissions and strengthen industrial competitiveness through the stable supply of high-quality, high-performance steel products.

- **GX Acceleration Agency** (https://www.gxa.go.jp/en/)
- **JFE Holdings and Mizuho Bank Enter into Transition Loan Agreement Utilizing the GX Acceleration Agency's Debt Guarantee Program (Japanese only)** (https://www.jfe-holdings.co.jp/uploads/260323.pdf)

Participation in the GX Future Consortium and GX Future League

The GX Future Consortium,*1 for which the GX Acceleration Agency serves as secretariat, is a public-private partnership platform that integrates and builds on the activities of the TCFD Consortium, which promoted enhanced climate-related disclosures, and the GX League, which advanced the creation of GX product markets and related rulemaking. The GX Future League has also been established as a forum for putting these efforts into practice, bringing together companies, local governments, financial institutions, research institutions, and other organizations to develop GX-related rules and create markets.

JFE Holdings, JFE Steel, JFE Engineering, and JFE Bars & Shapes participate in the GX Future Consortium and GX Future League because they consider these initiatives' objectives to be aligned with the JFE Group's policies for addressing climate change and advancing GX.

JFE Holdings has endorsed the recommendations of the final TCFD report and participated in the TCFD Consortium, taking part in discussions for enhancing climate-related financial disclosures. The TCFD Consortium developed guidance on climate-related financial disclosures and a guidebook on transition plans to encourage appropriate corporate disclosure and constructive dialogue with investors and financial institutions. JFE Holdings has applied the knowledge gained through these activities to enhance its climate-related disclosures, including analysis of the risks and opportunities climate change presents for its business, scenario analysis, and disclosure of its transition plan.

JFE Steel also actively participated in GX League working group activities and contributed to rulemaking for the creation and expansion of the market for GX products. JFE Steel participated in the Working Group for Adding Value to Green Products, where concepts and methods for appropriately assessing the value of emission reductions created through decarbonization investment were discussed. In 2023, the working group compiled "How to Add Value to Green Products."*2 The concepts presented in the document were subsequently used in discussions on creating GX product markets and contributed to developing the concept of "Reduced Emissions of Product."

Furthermore, based on discussions held by the GX Product Social Implementation Promotion Working Group, a framework for the GX Acceleration Declaration*3 was established in 2024 to encourage companies to proactively procure and use GX products and services. JFE Steel has also made the declaration*4 and is pursuing initiatives to form GX product markets and generate demand.

Going forward, while carrying forward the knowledge and achievements developed through the TCFD Consortium and GX League, the JFE Group will actively participate through the GX Future Consortium and GX Future League in enhancing climate-related disclosures; forming GX product markets; visualizing GX value; developing rules for creating demand and social implementation; and establishing mechanisms through which emission-reduction efforts are recognized by financial markets. Through these activities, the Group will contribute to realizing a decarbonized society and strengthening industrial competitiveness.

- ***1 GX Future Consortium** (https://gx-future-consortium.go.jp/en/)
- ***2 GX League Working Group Deliverables (Japanese only)** (https://gx-league.go.jp/action/wg/)
- ***3 METI: GX Acceleration Declaration Framework Newly Launched as Effort to Encourage Companies Proactively Engaging in Creation of a Market for GX** (https://www.meti.go.jp/english/press/2024/1206_001.html)
- ***4 JFE Steel GX Acceleration Declaration (Japanese only)** (https://www.jfe-steel.co.jp/release/2024/12/241220-3.html)

United Nations Global Compact

The JFE Group has signed the United Nations Global Compact, the world's largest sustainability initiative advocated by the United Nations, and has declared its support. We are committed to complying with and implementing the Ten Principles of the Global Compact and promoting the SDGs in order to realize a sustainable society. The JFE Group is also a member of the Global Compact Network Japan, the local network of the Global Compact. Having identified "Contribute to resolving climate change issues" as a material issue, the JFE Group is working to reduce GHG emissions. We also draw on the decarbonization initiatives of other participating companies to further advance efforts to reduce GHG emissions across the JFE Group and society as a whole.

SPEED Research Group

The SPEED (Special Project on Eco-innovation and Eco-business for Sustainable Development) Research Group contributes to the development of eco-innovations and eco-businesses through industry-academia-government collaboration and international cooperation. JFE Holdings participates in this research group and is involved in activities such as information sharing and opinion exchange with government, universities, research institutions, and companies.

EN Japan Climate Leaders' Partnership (JCLP)

JFE Engineering is a member of the Japan Climate Leaders' Partnership (JCLP). Established in 2009, the JCLP is a coalition of Japanese corporations that encourage the industrial community to fully recognize the urgency of climate change and take more decisive action to create a sustainable, decarbonized society. Companies fulfill their corporate responsibility by demonstrating leadership in the transition to a decarbonized society. The Company is participating in the Decarbonization Consortium, JCLP's platform for encouraging information sharing and collaboration between companies, and is actively engaged in creating opportunities to learn from companies, at the frontline of decarbonization efforts, and collaborating with other companies to create new solutions.

Japan's Steel Industry Initiatives

Japan Iron and Steel Federation (JISF) Initiatives

Long-term Vision for Climate Change Mitigation

JFE Steel is proactively engaged in a variety of activities as a member of the Japan Iron and Steel Federation (JISF). The JISF has been focusing on achieving the goals for 2020 under its Commitment to a Low Carbon Society (renamed the Carbon Neutrality Action Plan in FY2021). Furthermore, in November 2018, the JISF formulated and published its Long-term Vision for Climate Change Mitigation for 2030 and beyond, with JFE Steel playing a central role in its development. This document lays out the industry's challenge for realizing zero-carbon steel and explains the pathway for achieving the 2°C scenario for steelmaking and the necessity of ultra-innovative technologies to achieve the 1.5°C scenario. Also, on February 15, 2021, the JISF announced the "Basic Policy of the Japan steel industry on 2050 Carbon Neutrality sought by the Japanese government," declaring that the Japanese iron and steel industry will boldly accept the challenge of realizing zero-carbon steel.

› **Alignment with the JISF's Long-term Vision for Climate Change Mitigation policies** (P. 115)

JISF's Carbon Neutrality Action Plan

In February 2021, the JISF declared that the Japanese steel industry will boldly take on the challenge of realizing carbon neutrality. The Plan on Commitment to a Low Carbon Society was amended and renamed as the Carbon Neutrality Action Plan, and the Phase II target (2030 target) was revised. In the Eco Process of the plan, an ambitious 2030 target was set taking into account new perspectives such as the expansion of the use of cold iron sources as well as the maximum introduction of best available techniques (BATs) based on energy efficiency already among the highest in the world.

Regarding Eco Products, which is intended to reduce GHG emissions at the product use stage, high-performance steel is expected to play a particularly major role in the promotion of offshore wind power and electrification of automobiles, which are among the 14 fields of the government's Green Growth Strategy. Accordingly, in addition to the conventional quantitative evaluation of the five types of high-performance steel, the Japanese initiative will accelerate practical global warming measures from a global perspective by making these contributions visible. As for Eco Solutions, the JISF will develop a system for appropriately introducing technology to transfer and spread the production process for decarbonized steel in the Asian regions, where steel production is expected to expand.

Furthermore, regarding Innovative Technology Development, the JISF will take on the challenges of technologies such as direct hydrogen reduction and high-performance steel production using electric arc furnaces under the Green Innovation Fund, in addition to COURSE 50 and ferro-coke.

Overview of the Carbon Neutrality Action Plan

Eco Process

Cut energy-related CO_2 emissions (total volume) in FY2030 by 30% compared to the FY2013 level by adopting BATs to promote energy conservation, using waste plastics, adopting innovative technologies that are currently under development and scheduled to be in use around 2030, and using raw fuel with less CO_2 emissions.

Eco Product

Contribute to CO_2 emissions reduction by domestically and internationally supplying high-performance steel. This steel will reduce CO_2 emissions when used in the final product. The reduction potential in 2030 is estimated to be approximately 42 million t-CO_2 for the five steel products that have been quantitatively evaluated for their contribution to reducing emissions.

Eco Solution

Contribute to reducing CO_2 emissions worldwide by transferring and spreading the Japanese steel industry's advanced energy-saving technologies and facilities to the world's steel industry. Estimated contribution on CO_2 emissions reduction is 80 million t-CO_2 in 2030.

Innovative Technology Development

Contribute to carbon neutrality by boldly developing technologies in the following four areas.

- Hydrogen reduction technology using in-house hydrogen
- Low-carbon technology using CO_2 contained in externally sourced hydrogen or blast furnace exhaust gas
- Direct hydrogen reduction technology
- Impurity removal technology for electric furnace using direct reduced iron

Assessment of the FY2024 Carbon Neutrality Action Plan (Phase II) Results (JISF)

Total volume of energy-related CO_2 emissions in FY2024 was 144.23 million tonnes, a decrease of 50.24 million tonnes, or 25.8%, compared to FY2013. The achievement rate of the FY2030 target (to reduce by 30% from FY2013) has reached 86.1%. Energy-related CO_2 emissions and energy consumption are both declining, given continued energy saving efforts.

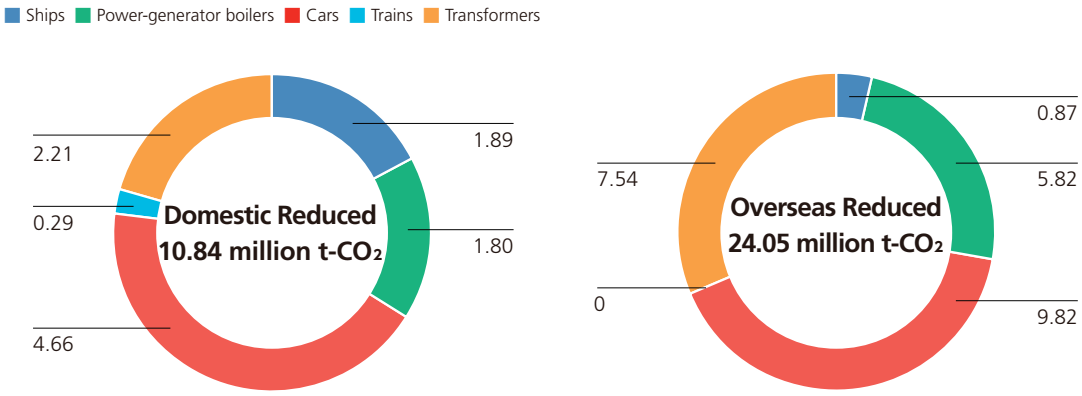
While the energy efficiency of the Japanese steel industry is among the highest in the world, vigorous efforts are made to promote greater energy savings by having businesses engaged in this effort draw upon subsidies to promote investment in saving energy and other actions.

Reduced CO_2 Emissions through High-Performance Steel Materials (Effects of Eco-Products)

The Japan Iron and Steel Federation (JISF) estimates the CO_2 emissions reduction impact of using high-performance steel materials. It is estimated that the use of five major high-performance steel materials in cars, transformers, ships, power generation boilers, and trains in Japan and overseas* (FY2024 production: 3.22 million tonnes, 4.1% of crude steel production) helped reduce CO_2 emissions by 34.89 million tonnes (10.84 million tonnes in Japan, 24.05 million tonnes overseas) in FY2024.

*Calculations made by the Institute of Energy Economics, Japan. The five materials are steel sheets for automobiles, grain-oriented electrical steel sheets, thick steel sheets for shipbuilding, steel tubes for boilers, and stainless steel sheets. FY1990 is the reference point for domestic reduction figures, with FY2003 as the reference point for the overseas reduction figures for automobiles and ships, FY1998 for steel pipes for boilers, and FY1996 for electrical steel sheets.

CO_2 Reduction Resulting from the Use of Five High-Performance Steel Materials in Japan and Overseas (FY2024)



Related Links

- **The Japan Iron and Steel Federation (JISF): Climate Change Policy page** (https://www.jisf.or.jp/en/activity/climate/index.html)
- **The Japan Iron and Steel Federation (JISF): LCA of Steel Products page** (https://www.jisf.or.jp/en/activity/lca/index.html)
- **The Japan Iron and Steel Federation (JISF): Publication of ISO 20915** (https://www.jisf.or.jp/en/activity/lca/iso/index.html)
- **The Japan Iron and Steel Federation (JISF): Publication of JIS Q 20915** (https://www.jisf.or.jp/en/activity/lca/iso/index.html)
- **The Japan EPD Program by SuMPO** (https://ecoleaf-label.jp/en/)

Industry-Academia Collaboration Initiatives

The JFE Group is actively engaged in joint research and collaboration with universities to strengthen scientific and practical responses to climate change. We are incorporating the latest knowledge and technologies through partnerships with academic institutions and advancing efforts toward realizing a sustainable society. Below are some of the main initiatives we are pursuing in collaboration with universities.

The University of Tokyo and 16 Organizations Announce Launch of Joint Research Initiative to Achieve a Carbon-Neutral Society Establishment of the Social Collaboration Program "Materials for Future Energy Infrastructure Trust (MEIT)"

JFE Steel, JFE Engineering, the University of Tokyo, IHI Plant Services Corporation, INPEX CORPORATION, ENEOS Xplora Inc., Kanadevia Corporation, Kawasaki Heavy Industries, Ltd., Kobe Steel, Ltd., JERA Co., Inc., TOKYO GAS NETWORK Co., Ltd., Namura Shipbuilding Co., Ltd., NIPPON STEEL ENGINEERING CO., LTD., NIPPON STEEL PIPELINE & ENGINEERING CO., LTD., NIPPON STEEL CORPORATION, Nippon Kaiji Kyokai (ClassNK), and Mitsubishi Heavy Industries, Ltd. have jointly established the Social Collaboration Program*, Materials for Future Energy Infrastructure Trust (MEIT), to scientifically elucidate and standardize the material reliability of energy infrastructure that supports a carbon-neutral society. The joint research commenced on May 1, 2025. JFE Steel, Kobe Steel, Ltd., NIPPON STEEL CORPORATION, and Nippon Kaiji Kyokai serve as the managing institutions for this program.

The purpose of the program is to evaluate the reliability of materials used in energy infrastructure and storage systems for decarbonized energy carriers such as liquefied hydrogen and ammonia, as well as in liquefied and high-pressure CO_2 in carbon capture and storage (CCS) projects. Through these efforts, the initiative seeks to accelerate the development of energy infrastructure for a carbon-neutral society, meet domestic demand, and strengthen international competitiveness.

*A collaborative research framework between the University of Tokyo and companies as well as other organizations on research topics of high public interest, operated with joint research expenses borne by the companies under contractual agreements with the university. This program facilitates interdisciplinary collaboration among researchers and the formation of research teams to address comprehensive societal challenges, thereby overcoming the limitations of conventional one-on-one collaborations between researchers and companies.

Overview of the Social Collaboration Program

As society transitions to carbon neutrality, energy infrastructure is shifting significantly from fossil fuels to new systems based on hydrogen and ammonia. This includes liquefied hydrogen tanks, liquefied ammonia tanks, liquefied CO_2 tanks, and high-pressure CO_2 pipelines for CCS, all of which require material reliability evaluations to ensure long-term safety and economic viability. The program will establish material selection criteria, post-weld heat treatment omission standards, and fracture prevention criteria to optimize infrastructure construction costs and promote international standardization that contributes to a sustainable energy society.

Program Name: Social Collaboration Program "Materials for Future Energy Infrastructure Trust (MEIT)"
Period: May 1, 2025–April 30, 2030
Joint Research Topics:

- Development of fracture evaluation technologies and standards for large-scale liquid ammonia tanks (stress corrosion cracking prevention and omission of post-weld heat treatment)
- Development of fracture evaluation technologies and standards for large-scale liquid CO_2 tanks (omission of post-weld heat treatment)
- Establishment of rapid ductile fracture prevention standards for high-pressure CO_2 pipelines in CCS projects
- Enhancement of reliability and evaluation technologies for next-generation materials (cost-effective stainless steel and low-nickel steel) for large-scale liquid hydrogen tanks

Collaborating Faculty: School of Engineering, University of Tokyo

› The University of Tokyo and 16 Organizations Announce Launch of Joint Research Initiative to Achieve a Carbon-Neutral Society Establishment of the Social Collaboration Program "Materials for Future Energy Infrastructure Trust (MEIT)"
(https://www.jfe-steel.co.jp/en/release/2025/05/250519.html)

ST JFE Steel and Tohoku University's Collaborative Research Laboratory for Green Steel

In February 2022, JFE Steel and Tohoku University jointly established the Collaborative Research Laboratory for Green Steel within the university's Graduate School of Engineering to research eco-friendly steel materials and production methods for the carbon-neutral era. The Collaborative Research Laboratory is managed under a cross-divisional system and develops collaborations across a wide range of fields, including the development of steelmaking processes and materials. This will facilitate a multifaceted approach to resolving issues related to low-carbon steelmaking processes and discovering innovative development themes from new perspectives. Furthermore, we will dispatch young researchers to nurture highly specialized human resources who will lead the next generation of the steelmaking industry.



Collaborative Research Wing, Materials Development, Graduate School of Engineering, Tohoku University

› JFE Steel and Tohoku Univ. Establish Collaborative Research Lab for Green Steel
(https://www.jfe-steel.co.jp/en/release/2022/220203.html)

EN JFE Engineering Carbon Neutrality Collaborative Research Center Established at the Institute of Science Tokyo

JFE Engineering and the Institute of Science Tokyo*1 opened the JFE Engineering Carbon Neutrality Collaborative Research Center (CRC) at the Institute's Laboratory for Zero-Carbon Energy under the former Tokyo Institute of Technology (currently the Institute of Science Tokyo) on July 1, 2022. The purpose of the CRC is to promote new technologies for realizing a carbon-neutral society. The two parties are comprehensively and jointly working on technical developments in carbon neutrality, transcending the boundaries of a typical individual joint research framework in a multilayered approach to generate innovation across the wide range of fields required for realizing a carbon-neutral society.

The CRC will promote the development of new technologies to help realize a carbon-neutral society by combining JFE Engineering's engineering technologies related to plant and infrastructure construction in the fields of energy and the environment with the Institute of Science Tokyo's advanced academic knowledge across a wide range of areas. The CRC will also continue collaborating with a variety of organizations through Science Tokyo GXI*2, a Ministry of Education, Culture, Sports, Science and Technology project for industry-academia collaboration led by the Institute of Science Tokyo.

*1 Tokyo Institute of Technology and Tokyo Medical and Dental University were integrated in October 2024.
*2 Intended to promote research activities that will initiate a Green Transformation (GX) society, strengthen startups, and substantiate industry-society collaboration.



Laboratory for Zero-Carbon Energy, Institute of Integrated Research
(Ookayama North Building 1)

› **JFE Engineering and Tokyo Institute of Technology establish JFE Engineering Carbon Neutrality Collaborative Research Center (Japanese only)** (https://www.jfe-eng.co.jp/news/2022/20220629.html)

Global Scale Initiatives

Global Actions to Address Global Warming

ISO 14404 is an international standard proposed by the Japan Iron and Steel Federation (JISF) to the International Organization for Standardization (ISO) as a methodology for the globally unified calculation of CO_2 emissions and intensity from iron and steel production, to ultimately assess the energy efficiency of steelworks. The Japanese steel industry is addressing global warming through international public-private collaborations, including ISO 14404-based assessment of steelworks in developing countries and recommending specific technologies best suited to India and ASEAN countries. It is continuing this effort together with the Ministry of Economy, Trade and Industry (METI) in order to enhance ISO 14404 so it can be applied to steel manufacturing facilities with more complex structures.

JFE Steel is also addressing global warming by participating in international activities, such as the Japan-India Public and Private Collaborative Meeting, the Japan-ASEAN Steel Initiative, and the Japan-China Steel Industries Exchange. In addition, JFE Steel is a member of the World Steel Association's Climate Action Data Collection Programme, which uses ISO 14404 as the standard for measurement and calculation.

WSA Climate Action Data Collection Programme Certification



› **worldsteel Climate Action Data Collection Programme** (https://worldsteel.org/climate-action/climate-action-data-collection/data-providers/)

Efforts to Assess the Environmental Impact of the Excellent Recyclability of Steel Products

Accurately evaluating the environmental impact of products requires assessment and quantification of impact over their entire life cycles, from raw resource mining to material production, product manufacture, use, and final disposal. Life cycle assessment (LCA) is one evaluation method.

After final products such as automobiles and buildings finish their mission in society, all of their steel components can be recycled and reused. Closed-loop recycling is an excellent characteristic of steel materials. From the perspective of LCA, steel can be viewed as having an extremely low environmental impact compared to other materials.

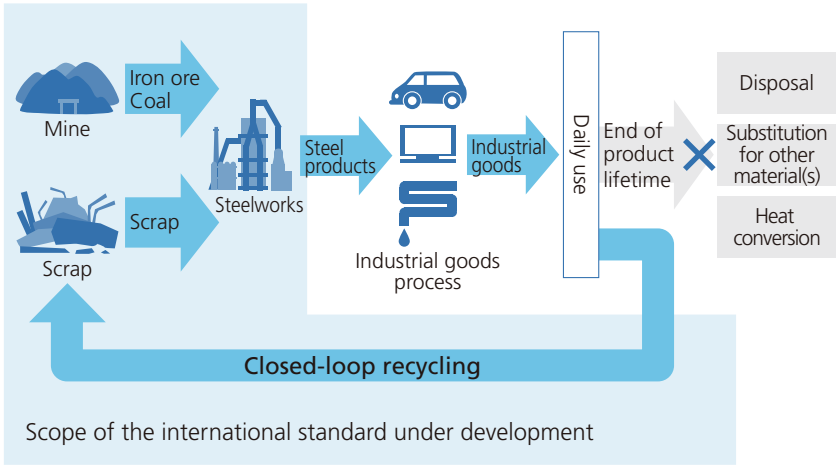
JFE Steel played a major role in the development of ISO 20915 (Life Cycle Inventory Calculation Methodology for Steel Products) and JIS Q 20915 (Life Cycle Inventory Calculation Methodology for Steel Products), initiatives led by the Japan Iron and Steel Federation (JISF) that take into account the impact of recycling and provide life cycle inventory (LCI) calculation methods specific to steel products.

In addition, 14 Japanese steelmakers using blast furnaces or electric arc furnaces joined forces to calculate the Japanese average for LCI of different steel products. Calculations based on their FY2022 operational data were also published.

JFE Steel acquired SuMPO EPD certification for 36 product types under the SuMPO Environmental Label Program under the Sustainable Management Promotion Organization (SuMPO). These cover three types of steel sheets for cans, nine flat steel products, nine construction steel products, three types of steel plates (steel plates for marine structures and wind power, shipbuilding steel plates, and UOE pipes), four steel pipe products, and eight bar and wire rod products. We will continue to make use of SuMPO EPD labels to help customers protect the environment and strengthen communications with them.

› **Value of Steel** (P. 4)

Life Cycle of Steel Materials



› **Action by the steel industry: LCI data collection** (https://www.jisf.or.jp/en/activity/lca/data/index.html)

Japan-Korea Green Steel Joint Seminar

The 3rd Japan-Korea Green Steel Joint Seminar was held in Seoul, South Korea, on December 9, 2025, jointly organized by the Japan Iron and Steel Federation and the Korea Iron and Steel Association. The seminar was attended by representatives from both countries, including Masaaki Izumiyama, Chairman of the Global Environment Committee, the Japan Iron and Steel Federation (Nippon Steel Corporation), and Lee Kyung-ho, Vice Chairman of the Korea Iron and Steel Association, as well as guests of honor, including Manabu Nabeshima, Director of the Metals Division of the Ministry of Economy, Trade and Industry of Japan, and Song Young-sang, Director of the Steel and Ceramics Division and Steel Team Leader, Office of Industrial Policy, Ministry of Trade, Industry and Energy of the Republic of Korea. A total of 65 participants, mainly from government organizations, steel companies, and academia in both Japan and South Korea, exchanged opinions on wide-ranging topics related to carbon neutrality in the steel industry.

Public and Private Collaborative Meeting between Indian and Japanese Iron and Steel Industry

The Japan Iron and Steel Federation has held the Public and Private Collaborative Meeting between Indian and Japanese Iron and Steel Industry annually since 2011 with support from the Ministry of Economy, Trade and Industry, and JFE Steel attends this meeting every year. The purpose of this meeting is to apply the technology and experience of Japan's steel industry, which boasts world-leading energy efficiency, to recommend policies on energy conservation and environmental protection to the Indian steel industry and promote the transfer of energy-saving and environmental protection technologies from Japan.

The FY2025 meeting was held in Tokyo on January 20, 2026, with support from the Economic Research Institute for ASEAN and East Asia (ERIA), as in the previous fiscal year. It was moderated by Hiroyuki Tezuka, Secretary of the International Environmental Strategy Committee of the Japan Iron and Steel Federation and Fellow of JFE Steel. Participants included Nobuyuki Matsumoto, Director of the Metal Technology Office, Metals Division, Ministry of Economy, Trade and Industry of Japan; Vinod Kumar Tripathi, Joint Secretary of the Ministry of Steel of India; and Nuki Agya Utama, Director of Energy Policy and Head of the Asia Zero Emission Center at ERIA. About 40 participants, mainly from government organizations and steel companies in both Japan and India, engaged in lively discussions on topics related to carbon neutrality in the steel industry of both countries. JFE Steel will continue to play a major role in this meeting and contribute to CO_2 reduction in India by transferring Japanese energy-saving technologies.

ASEAN-Japan Steel Initiative

In May 2014, the Japan Iron and Steel Federation and the ASEAN Iron and Steel Council (AISC) signed a memorandum of understanding to promote regional collaboration in the areas of the environment, standardization, and trade. The ASEAN-Japan Steel Initiative (AJSI) was launched as a public-private environmental effort to strengthen cooperation in environmental and energy saving efforts in ASEAN countries. As part of its activities, the initiative developed a Technologies Customized List (electric arc furnaces) as well as a Technologies Customized List (blast furnaces), which include energy-saving, environmental protection, and recycling technologies for electric arc furnaces and blast furnaces suitable for the ASEAN steel industry.

On June 2, 2026, as part of the ASEAN-Japan Steel Initiative (AJSI), a webinar was held jointly with the Economic Research Institute for ASEAN and East Asia (ERIA). Participants included Nobuyuki Matsumoto, Director of the Metal Technology Office, Metals Division, Ministry of Economy, Trade and Industry of Japan; Dr. Nuki Agya Utama of ERIA; and Hiroyuki Tezuka, Chairman of the Energy Technology Committee of the Japan Iron and Steel Federation and Fellow of JFE Steel.

At the seminar, participants from Japan and ASEAN countries discussed GX steel as well as policy and technological initiatives toward carbon neutrality.

Japan-China Steel Industry Environmental Protection and Energy Conservation Technology Conference

This conference has been held since 2005, based on the memorandum of understanding that was signed at the Japan-China Steel Industry Environmental Protection and Energy Conservation Technology Conference, held in Beijing in July 2005 with the participation of top executives from both countries' steel industries. The purpose of the conference is to raise the level of environmental conservation and energy saving in both countries through information exchanges between technical experts from steel manufacturers in Japan and China. The importance of this conference has been growing as it helps to promote not only sound development of the steel industry in both countries but also the effective use of resources and environmental conservation.

The FY2024 event was held in Wuhan, China, in March 2025, with roughly 80 participants from both countries' steel industries. Representatives from both sides presented the status of actions toward carbon neutrality, energy conservation, CO_2 reduction, and environmental protection, and actively exchanged information and opinions on topics of shared interest in both countries' steel industries, such as green steel. JFE Steel will continue to participate in this conference to contribute to global carbon neutrality, energy saving, environmental action, and the sustainable development of the steel industry.

Lecture Events

The JFE Group delivers lectures at various events to increase awareness of our efforts to combat climate change.

Major Lectures Held in Japan

- Lecture: "JFE Steel's Initiatives and Challenges toward Carbon Neutrality—JFE Steel GX Process Transformation Roadmap" at a lecture event held in conjunction with the Ordinary General Meeting of the Japan Mechanical Design Industries Association
  Date: June 11, 2026
  Lecturer: Hiroyuki Tezuka (Fellow, JFE Steel Corporation)

- Lecture: "Latest Technology in Energy and Environment in the Steel Industry and Measures against Global Warming" in the Institute of Science Tokyo's Advanced Course in Science and Technology in Energy and Environment
  Date: December 17, 2025
  Lecturer: Ikuhiro Sumi (Principal, Green Transformation Strategy Department, JFE Steel Corporation)

- Lecture: "The Path to Decarbonization of Steel — Green Steel Contributing to the Green Transition" at the Kyoto University Graduate School of Management Energy Industry Seminar, "Strategies, Prospects, and Challenges toward a Carbon-Neutral Society"
  Date: November 27, 2024
  Lecturer: Ikuhiro Sumi (Leader, Global Environment Team, Green Transformation Strategy, JFE Steel Corporation)

- Lecture: "Carbon Neutrality Initiatives" at the Bingo Urban Roundtable Lecture Meeting
  Date: October 31, 2024
  Lecturer: Hiroyuki Tezuka (Fellow, JFE Steel Corporation)

- Lecture: "JFE Steel's Initiatives for Achieving Carbon Neutrality and the Challenges" at the APAC Financial Institutions Summit 2024 — Banking
  Date: October 2, 2024
  Lecturer: Hiroyuki Tezuka (Fellow, JFE Steel Corporation)

Major Lectures Held Overseas

The JFE Group provides lectures at various events to raise awareness overseas of our efforts to address climate change.

- Lecture: "Japan's Domestic Policies of Carbon Reduced Steel Trading Market" at the COP30 Korea Pavilion side event "Global Policies and Leadership for Creating a Premium Market for Carbon-Reduced Steel"
  Date: November 17, 2025
  Lecturer: Hiroyuki Tezuka (Fellow, JFE Steel Corporation)

- Lecture: "Technology roadmap for Iron and Steel Industry, Transition pathways" at the COP30 Japan Pavilion Keidanren/IEEJ/GISPRI event "Green Transformation — Balancing Economic Growth, Energy Security, and Decarbonization"
  Date: November 19, 2025
  Lecturer: Hiroyuki Tezuka (Fellow, JFE Steel Corporation)

- Lecture: "Japan's Strategy for GX Steel Market Development" at "The Good, the Bad and thEUgly: The Need for Harmonisation of Standards," a worldsteel event at the Standards Pavilion
  Date: November 18, 2025
  Lecturer: Hiroyuki Tezuka (Fellow, JFE Steel Corporation)

Evaluation of Alignment with Major Organizations

The JFE Group participates in various industry and economic organizations with the aims of realizing a sustainable society and enhancing corporate value. Through these affiliations, we pursue policy recommendations, share information, and address industry-wide challenges while fulfilling the social responsibilities associated with the business activities of our operating companies. The evaluation of alignment between the policies of major organizations in which the JFE Group participates and JFE's stance is presented below along with the results.

Summary of Evaluation Results

We evaluated the consistency of the main recommendations and activities published by each organization with our aforementioned views and stance. As a result, we confirmed that the policies, stances, and policy recommendations clarified by each organization are aligned with our own views and stance. Going forward, we will continue to encourage constructive dialogue and exchanges of opinions with these organizations to ensure that our views and stance are reflected in the activities conducted by the organizations we belong to as members.

Organization / Policy	GX Policies	Energy Policy	Carbon Pricing	Creation of GX Product Markets
The Japan Iron and Steel Federation	Aligned	Aligned	Aligned	Aligned
World Steel Association	Aligned	Aligned	Aligned	Aligned
Keidanren (Japan Business Federation)	Aligned	Aligned	Aligned	Aligned

The Japan Iron and Steel Federation

Purpose: To promote the sound production, distribution, consumption, and trade of steel, thereby contributing to the development of the Japanese economy and the improvement of people's livelihoods.
Participation of JFE Group Officers: Chairman, Masayuki Hirose, Representative Director, President and CEO of JFE Steel Corporation

Item	Result	Basis / Reference URL, etc.
GX Policies	Aligned	In 2021, the Federation announced the Basic Policy of the Japan steel industry on 2050 Carbon Neutrality, in which it declared its agreement with the ambitious national policy of achieving carbon neutrality in 2050 and its own bold commitment to take on the challenge of realizing carbon neutrality in the steel industry. It has also requested the establishment of a national strategy for decarbonization, financial support to commercialize and implement the results of technology development, fostering public understanding that achieving decarbonization will involve significant costs, and building mechanisms for sharing such costs across society. **› Basic Policy of the Japan steel industry on 2050 Carbon Neutrality aimed by the Japanese government (Feb. 2021)** (https://www.jisf.or.jp/en/activity/climate/documents/CN2050_eng_201210215.pdf)
Energy Policy	Aligned	In its comments on the draft 7th Strategic Energy Plan, the federation recognized it as a realistic plan that squarely addresses changes in the energy situation while maintaining the S+3E perspective, and that reemphasizes the importance of stable supply and economic efficiency. It also valued the fact that resource-poor Japan will have a number of options, including renewable energy, nuclear power, and decarbonized thermal power, moving away from the conventional binary view of renewables versus nuclear. It has also stated that the integration of energy policy and industrial policy is an extremely important perspective in advancing GX, and that specific policies are needed to promote decarbonization on the premise of strengthening industrial competitiveness and ensuring inexpensive and stable energy supply. **› Comments on the Draft 7th Strategic Energy Plan (Japanese only)** (https://www.jisf.or.jp/news/topics/documents/7jienekian-ikenr.pdf)
Carbon Pricing	Aligned	In its comments on the draft GX2040 Vision, the Federation valued the Growth-oriented Carbon Pricing Concept for clearly indicating the timing of introduction and the basic framework of emission trading schemes and other systems. It stated that designing the GX-ETS system requires appropriately reflecting differences in timelines and marginal abatement costs for decarbonization by sector and designing a system that supports GX promotion in the Japanese steel industry while sustaining domestic production capacity and maintaining and strengthening international competitiveness. In addition to introducing carbon pricing, the federation has also underlined the urgency of creating a GX product market to ensure investment predictability for GX. **› Comments on the Draft GX2040 Vision (Japanese only)** (https://www.jisf.or.jp/news/topics/documents/GX2040visionan-ikenr2.pdf) **› Explanation Materials by The Japan Iron and Steel Federation — Working Group on Carbon Pricing toward GX (1st Meeting) (Japanese only)** (https://www.cas.go.jp/jp/seisaku/gx_jikkou_kaigi/carbon_pricing_wg/dai1/siryou4.pdf)
Creation of GX Product Markets	Aligned	The federation considers the creation of a GX market essential for increasing the predictability of decarbonization investments. In its comments on the draft GX2040 Vision, it valued the extensive descriptions regarding GX market creation, particularly the implementation of initiatives such as visualization of GX value, public procurement, and private procurement. It has also expressed that the government's proactive initiatives, including the creation of initial demand, are extremely important for GX market creation, that clear policy directions for steadily expanding market size are required, and that more concrete measures such as regulatory and institutional measures for procurement are necessary to enhance the predictability of investment recovery and that the government should present a more specific roadmap. **› Comments on the Draft GX2040 Vision (Japanese only)** (https://www.jisf.or.jp/news/topics/documents/GX2040visionan-ikenr2.pdf)

World Steel Association

Purpose: To promote sustainability, safety, technological innovation, and human resource development in the steel industry and contribute to the overall development of the industry through international collaboration and the provision of information

Participation of JFE Group Officers: Member of the Executive Committee — Masayuki Hirose, Representative Director, President and CEO of JFE Steel Corporation.

Item	Result	Basis / Reference URL, etc.
GX Policies	Aligned	In its policy paper "Climate change and production of iron and steel," worldsteel expressed its full support for the goals of the Paris Agreement and declared that it would realize industrial and social transformation by reducing CO_2 emissions from steel production. **› Climate change and production of iron and steel (Nov. 2025)** (https://worldsteel.org/wp-content/uploads/Policy-Paper-climate-change-and-the-production-of-steel.pdf)
Energy Policy	Aligned	The same policy paper recommended the utilization of low-carbon energy, such as renewable energy, nuclear power, and fossil fuels with mitigation technologies such as CCS as a technological option for the steel industry's climate change measures. **› Climate change and production of iron and steel (Nov. 2025)** (https://worldsteel.org/wp-content/uploads/Policy-Paper-climate-change-and-the-production-of-steel.pdf)
Carbon Pricing	Aligned	The policy paper states that strong demand-side signals and clear policies are essential for deploying low-emission technologies and discusses market creation, including public procurement schemes, alongside effective carbon pricing, aligning with JFE's stance that both should be advanced in tandem. **› Climate change and production of iron and steel (Nov. 2025)** (https://worldsteel.org/wp-content/uploads/Policy-Paper-climate-change-and-the-production-of-steel.pdf)
Creation of GX Product Markets	Aligned	The policy paper also noted that steel products using low-carbon technologies will be more expensive than conventional products and therefore require policy support to compete in the market. It also pointed to rising demand from customer companies for low-carbon steel products. To meet this demand, worldsteel proposed a method for allocating each steelmaker's GHG emission reduction value to specific products (chain of custody, or CoC) and published principles and guidelines to enhance transparency and clarity regarding the application of this method. **› Principles "Chain of custody approaches in the steel sector"** (https://worldsteel.org/wp-content/uploads/worldsteel-chain-of-custody-principles.pdf) **› worldsteel guidelines for GHG chain of custody approaches in the steel industry** (https://worldsteel.org/wp-content/uploads/worldsteel-chain-of-custody-guidelines_Version-1.2_Feb2026_FINAL-1.pdf)

Keidanren (Japan Business Federation)

Purpose: To draw out the vitality of companies, individuals supporting companies, and local communities as a comprehensive economic organization, thereby contributing to the autonomous development of the Japanese economy and the improvement of people's livelihoods.

Participation of JFE Group Officers: Chairman of the Tax System Committee — Yoshihisa Kitano, Representative Director, President and CEO of JFE Holdings, Inc.

Item	Result	Basis / Reference URL, etc.
GX Policies	Aligned	In its 2022 publication "Toward Green Transformation (GX)," Keidanren expressed the view that to realize carbon neutrality by 2050, Japan as a whole must create a "virtuous cycle of the economy and environment" and promote Green Transformation (GX), representing the transformation of the entire economic and social system. It also recommended that the government formulate a GX Policy Package as a grand design for GX. **› Toward Green Transformation (GX) (May 2022)** (https://www.keidanren.or.jp/en/policy/2022/043_point.pdf)
Energy Policy	Aligned	In its 2024 proposal "Recommendations for Revising the Strategic Energy Plan," Keidanren stated that ensuring safety is the fundamental premise, and that the principles of (a) energy security and stable supply, (b) economic efficiency, and (c) environmental compatibility (S+3E) must be upheld. It emphasized the need to pursue an optimal mix of diverse energy sources suited to Japan's characteristics, to further expand the introduction of renewable energy that meets the three requirements of low cost, stable supply, and business discipline, and to maximize the use of nuclear and atomic energy. **› Recommendations for Revising the Strategic Energy Plan (Oct. 2024) (Japanese only)** (https://www.keidanren.or.jp/policy/2024/071_honbun.pdf)
Carbon Pricing	Aligned	In its comments on the public consultation for the "Basic Policy for the Realization of GX," Keidanren evaluated the government's growth-oriented carbon pricing concept as a key step for achieving more than 150 trillion yen in public and private GX investment while reducing and curbing emissions. It also requested that, while fully considering technological developments and the opinions of the business community, specific system design should proceed in a way that contributes to maintaining and strengthening industrial competitiveness. **› Comments on the Public Consultation for the Basic Policy for the Realization of GX (Jan. 2023) (Japanese only)** (https://www.keidanren.or.jp/policy/2023/004.html)
Creation of GX Product Markets	Aligned	In its comments on the public consultation for the GX2040 Vision (Draft), Keidanren stated that creating a GX market is indispensable for enhancing the predictability of GX investment. It proposed that, in addition to measures such as visualization of GX value and demand-stimulating initiatives, a specific roadmap should be formulated that specifies the timing of introducing various regulatory and institutional measures. It also emphasized that the cost increases associated with the production of GX products should be reliably reflected in product prices, and that consumers who purchase such products should accept these cost increases so that they can be fairly and equitably distributed across society as a whole. **› Comments on the Public Consultation for the GX2040 Vision (Draft) (Jan. 2025) (Japanese only)** (https://www.keidanren.or.jp/policy/2025/010.html)

Identification and Assessment of Risks and Opportunities (TCFD Scenario Analysis)

Initiatives

The JFE Group intends to achieve carbon neutrality by 2050 and regards climate change as a key management issue. To understand the impact of climate change on its business activities and finances, it leverages the scenario analysis in line with the TCFD recommendations to identify and assess climate change-related risks and opportunities. The Group aims to strengthen business resilience to climate change and achieve sustainable growth by incorporating the results of these analyses in its management strategies and business plans.

For details on governance and risk management based on the TCFD recommendations, please refer to Environmental Management, and for details on strategy, metrics, and targets, please refer to Initiatives to Address Climate Change Issues.

› **Environmental Management** (P. 45)
› **Initiatives to Address Climate Change** (P. 49)

Timeline of Milestones Related to Climate Change Developments and JFE's Key Initiatives

1997 Kyoto Protocol adopted at COP3 in Kyoto
2008 JISF's Voluntary Action Plan launched
2013 JISF's Commitment to a Low Carbon Society launched
2015 Paris Agreement adopted at COP21
2017 TCFD published the final report of its recommendations
2018 JISF announced the Long-term Vision for Climate Change Mitigation, Zero Carbon Steel
2019 JFE Group announced its endorsement for the final report of the TCFD recommendations
JFE Group published a scenario analysis in line with the TCFD recommendations
2020 Keidanren launched the Challenge Zero initiative
Ministry of Economy, Trade and Industry published a list entitled Companies Taking on the Zero-Emission Challenge
JFE Group published its targets in its medium- to long-term vision (target for 2030 and achieving carbon neutrality by 2050)
Prime Minister Suga declared Japan will achieve carbon neutrality by 2050
2021 JISF announced the Basic Policy of the Japan Steel Industry on 2050 Carbon Neutrality Aimed by the Japanese Government
JFE Group published its roadmap for achieving carbon neutrality in 2050 in the JFE Group Environmental Vision for 2050
Japanese government formulated the Green Growth Strategy Through Achieving Carbon Neutrality in 2050
2022 JFE Group announced that the CO_2 emissions reduction target for FY2030 for JFE Steel has been revised upward to 30% or more compared to FY2013
JISF published the "Evaluation of the Phase I Target (FY2020 Target)" and Phase II target (FY2030 target) of reducing the total volume of energy-related CO_2 emissions by 30% compared to FY2013 in its Activities to Combat Global Warming—Report of JISF's Carbon Neutrality Action Plan (Commitment to a Low Carbon Society) (March 2022)
2023 The Act Concerning the Promotion of a Smooth Transition to a Decarbonized Economic Structure (GX Promotion Act) was enacted
2024 JFE Steel announced its GX Acceleration Declaration
2025 Japanese government published GX2040 Vision
JFE Group announced its long-term vision JFE Vision 2035 and the Eighth Medium-term Business Plan (FY2025–FY2027)

The JFE Group publishes information on specific initiatives through the following website.
› **Challenge Zero** (https://www.challenge-zero.jp/en/member/34)

- **Zero-Emission Challenge (Japanese only)** (https://www.meti.go.jp/policy/energy_environment/global_warming/zero-emission_challenge/index_zeroemi.html)
- **GX Future Consortium: About the GX Acceleration Declaration** (https://gx-future-consortium.go.jp/gx-declaration/)
- **GX Future Consortium: List of Companies Making the GX Acceleration Declaration** (https://gx-future-consortium.go.jp/gxdec-list/)

Scenario Analysis

Tools and Methods

Scenario analysis is used to portray an accurate understanding of climate-related risks and opportunities and assess implications for the current business strategy, thereby enabling an organization to establish strategies that reflect the results of the assessment. As our business could be significantly affected by climate change, we have created both a 1.5°C scenario and a 4°C scenario. In setting the 1.5°C scenario, we also took into account the 2°C / below 2°C scenarios*1.

All scenarios are based on those developed by the International Energy Agency (IEA). Analysis was conducted under the assumption that major emitting countries implement uniform carbon pricing to increase the feasibility of achieving the 1.5°C target.

Our goal under the long-term scenario analysis is to achieve carbon neutrality by 2050. We conducted risk assessments that take into account the 1.5°C scenario (IPCC 1.5°C Special Report) in steelmaking and the necessity of ultra-innovative technology to achieve the Shared Socioeconomic Pathways (SSP) for carbon neutrality by 2050.

Selected Scenario		1.5°C Scenario	4°C Scenario
Reference Scenario	Transition Risks	Transition scenarios developed by the IEA • IPCC Special Report on Global Warming of 1.5°C*2 • NZE2050	Transition scenarios developed by the IEA • Stated Policies Scenario (STEPS)*3 • Reference Technology Scenario (RTS)*4
	Physical Risk	Climate change projection scenario developed by the Intergovernmental Panel on Climate Change (IPCC) • Representative Concentration Pathways (RCP) Scenario*5 • Shared Socioeconomic Pathways (SSP)*6	
How Society will Look		Dynamic policies will be adopted and technical innovations will progress to limit the average temperature rise by the end of this century to below 1.5°C and realize sustainable development. Assume a society in which our business is affected by social changes accompanying transition to a decarbonized society. • Worldwide/industry-wide uniform carbon pricing*7 • Increase in the ratio of sales of electric vehicles to overall vehicle sales	Despite new policies implemented in each country based on approaches under the Paris Agreement, the average temperature will rise by about 4°C by the end of this century. Assume a society in which our business is affected by temperature rise and other climate change. • Increase in the occurrence of flooding • Sea level rise

*1 The Sustainable Development Scenario (SDS) and the 2°C Scenario (2DS) are used for the 2°C / below 2°C scenarios.
*2 Source: IEA's Net Zero by 2050 — A Roadmap for the Global Energy Sector
*3 Source: IEA's World Energy Outlook 2024
*4 Source: IEA's Energy Technology Perspectives 2017
*5 Source: IPCC Fifth Assessment Report
*6 Source: IPCC Sixth Assessment Report
*7 When carbon pricing varies by country, a gap opens in international competitiveness between industries in countries with strict GHG regulations and those in countries with less strict regulations. This results in carbon leakage, where production and investment shrink in stricter countries (reducing GHG emissions) while expanding in more lenient countries (increasing GHG emissions). Accordingly, it is assumed that carbon pricing will be introduced in developed countries and some developing countries.

Scope of Business and Period for Analysis

This analysis covers the following businesses: the steel business by JFE Steel, the engineering business by JFE Engineering, the trading business by JFE Shoji, and businesses carried out by some of the other Group companies. The period covered is up to 2050.

Alignment with the JISF's Long-term Vision for Climate Change Mitigation

The Japan Iron and Steel Federation (JISF) has been working toward its Commitment to a Low Carbon Society, and Phase I of this initiative ended in FY2020. From FY2021, the effort was rebranded as the Carbon Neutrality Action Plan, and the Phase II target (FY2030 target) was revised. In November 2018, the JISF also formulated and published the Long-term Vision for Climate Change Mitigation for 2030 and beyond. JFE Steel played a central role in the formulation of this long-term vision. The vision represents the industry's challenge toward realizing zero-carbon steel and lays out the prospect of achieving the 2°C scenario for steelmaking and necessity of ultra-innovative technologies to achieve the 1.5°C scenario. Furthermore, on February 15, 2021, the JISF announced the "Basic Policy of the Japan Steel Industry on 2050 Carbon Neutrality Aimed by the Japanese Government," which declares that the Japanese iron and steel industry will boldly accept the challenge of realizing zero-carbon steel.

The JFE Group's scenario analysis is intended to ensure resiliency in our Group's business strategy during the intermediate stages of these long-term challenges.

Process to Identify Key Factors that Impact the Business

STEP 1: Examine the entire value chain from a holistic perspective and sort out factors that impact the businesses under analysis
(For more information on risks and opportunities in the value chain, please refer to: › JFE Group Value Chain (P. 28)

STEP 2: Examine all factors at an overview level and identify key factors by taking into account the level of impact and stakeholder expectations and concerns

	1.5°C Scenario	4°C Scenario
Impact on Procurement		❺ Unstable raw materials procurement due to increased occurrence of climatic hazards
Impact on Direct Operation	❶ Decarbonization of iron and steelmaking process ❷ Increased needs for effective utilization of steel scrap	❻ Damage to production bases and offices caused by climatic hazards
Impact on Product and Service Demand	❸ Change in demand for automotive steel, etc. ❹ Increase in demand for solutions to enhance decarbonization	❼ National resilience



Axis for identifying key factors: • Level of impact (possibility of risks and opportunities arising × Level of impact if manifested)
• Expectations and concerns of stakeholders

Results of Scenario Analysis

Climate change is a critical business concern for the JFE Group from the perspective of business continuity. Our steel business, which emits at least 99% of the Group's total GHG emissions, has been developing and applying energy-saving and CO_2 emissions reduction technologies to the steelmaking process to address decarbonization risks. At the same time, given rising demand for effective use of steel scrap, we are working to convert the steelmaking process from blast furnaces to electric arc furnaces and secure cold iron sources. Going forward, we will continue to develop processes to further reduce environmental impact, and by globally deploying our diverse technologies, we will view our response to climate change as an opportunity and contribute to addressing related issues.

The JFE Group has developed and maintains a variety of eco-friendly products and technologies, including high-performance steel materials that contribute to energy savings when used by customers, as well as renewable energy power generation, thereby responding to the growing demand for decarbonization solutions. Going forward, with automobiles expected to become increasingly lighter and more electrified, we will further enhance the performance of JFE's high tensile strength steel sheets and electrical steel sheets to meet the changing demand for automotive steel and contribute to the realization of a low-carbon society.

It is also important to prepare for physical risks such as unstable raw material procurement due to frequent meteorological disasters and the damage they cause. The JFE Group is strengthening its resilience to address these risks.

At the same time, we will continue to develop and disseminate the necessary technologies for achieving the long-term goal of the Paris Agreement of keeping the global average temperature increase well below 2°C compared to pre-industrial levels and limiting it to 1.5°C. We will also contribute to national resilience by supplying and constructing steel for social infrastructure in preparation for the anticipated intensification of meteorological disasters.

Analysis Results

	Societal Changes	Opportunities / Risks		Expectations and Concerns of Stakeholders toward the JFE Group	Strategies and Initiatives	Financial Impact (2030–2035 assumptions)*1	
						Item	Amount / scale
1.5/C Scenario Key Factor ❶ **Decarbonization in steel production processes**	Increasing societal demands for decarbonization of steel production processes	Introduction of ultra innovative technologies for drastic decarbonization	Opportunities	JFE leading the supply of high-environmental value steel through the introduction of ultra innovative technologies such as EAF	• Implementation of conventional low-carbon technologies • Introduction of large-scale EAF capable of producing high-quality steel • Utilization of low-carbon direct-reduced iron • Development and implementation of ultra-innovative technologies • Studies of feasibility to commercialize CCUS • Expansion of JGreeX™ supply capacity • Lobbying to create demand for steel with environmental value • Collaboration with other companies in the Japan Iron and Steel Federation to promote steel with environmental value	Increase in sales of steel with added environmental value	Up to +¥150 billion per year
			Transition risk	Increase in investment to introduce ultra innovative technologies such as EAF	• Reinforcement of the earnings base • Secure funding for investments and technology development • Lobbying for government support • Expansion of JGreeX™ sales	Amount of GX-related investment for 2025–2035	Approx. –¥0.6 trillion
		Implementation of carbon pricing	Transition risk	• Increased financial burden due to the purchase of emission allowances and an increased burden of compliance require-ments due to strengthened regulation • Decline in sales volume to Europe	• Ensuring full compliance with environmental regulations • Establishment of reliable carbon-neutral technologies • Policy engagement toward achieving carbon neutrality	Increased costs burdens resulting from the introduction of systems such as GX-ETS*2 and EU-CBAM, and a decline in sales to Europe	Up to about –¥10 billion per year
1.5/C Scenario Key Factor ❷ **Increase in demand for the effective utilization of steel scrap**	Increased attention on EAF process for low CO_2 emissions	Higher competition and prices for cold iron sources (scrap/direct-reduced iron)	Transition risk	Increase in the cost of purchasing cold iron sources	• Collaboration with customers and users for scrap collection • Establishment of technologies for use of low-grade and difficult-to-use scrap • Participation in direct-reduced iron projects • Expansion of scrap handling volume • Reduction of manufacturing costs • Passing higher costs onto steel sales prices	Increase in purchase cost for cold iron sources	Up to about ¥30 billion per year
		Stronger demand for electric power due to shift from BF-BOF process to EAF process	Transition risk	Increase in electric power used when manufacturing steel (increase in power used, decrease in byproduct gases)	• Reduction of manufacturing costs • Passing higher costs onto steel sales prices • Lobbying related to prices and stable supply of electric power	Increase in manufacturing costs due to process transition (equivalent to the output of approx. 0.5 nuclear reactors)	Up to about ¥50 billion per year
1.5/C Scenario Key Factor ❸ **Change in demand for steel for automotive use**	Change in demand for automobiles	Changes in product sales mix due to EV production	Opportunities	Increase in sales volume of electrical steel as material for EV motors	• Expansion of production facilities for electrical steel sheets • Establishment of a global processing and distribution system for electrical steel sheets	Increase in sales of electrical steel sheets	Tripling of production capacity for top-grade non-oriented electrical steel sheets for EV main drive motors (compared to FY2024)
			Opportunities	Increase in sales volume of high-strength steel to improve vehicle crash safety	• Increase in production capacity for ultra-high-strength steel sheets	Increase in sales due to expanded orders for ultra-high-strength steel sheets	New CGL capacity for manufacturing ultra-high-strength automotive steel sheets +360,000 tonnes
			Transition risk	Decrease in steel sales volume due to decline in internal combustion engines and shift to other materials through use of multi-materials	• Develop high-performance products	Decrease in sales of conventional automotive steel sheets	Small impact
1.5/C Scenario Key Factor ❹ **Increase in demand for solutions promoting decarbonization**	Transition to decarbonized society	Expansion of business opportunities in decarbonization and solutions business	Opportunities	Expansion of renewable energy-related business	• Expansion of integrated construction and operation businesses for renewable energy plants (offshore wind, geothermal, solar, etc.) • Development and application of CCUS solutions and commercialization of technologies related to green hydrogen and ammonia	Increase in segment profit in the engineering business's CN-related fields	Approx. ¥31 billion/year
			Opportunities	Expansion of the waste-to-resource-related business	• Expansion of integrated construction and operation businesses for plants that thoroughly utilize waste (waste-to-energy power generation, recycling, etc.)	Increase in segment profit in the engineering business's WtR-related fields	Approx. ¥37 billion/year
			Opportunities	Expansion of low-carbon business (ecosolutions) as cutting-edge energy conservation technologies developed and commercialized in Japan are offered to emerging countries	• Support for low-carbon steel manufacturing technology	Increase in sales in the overseas solutions business	Tens of billions of yen
4°C Scenario Key Factor ❺ **Unstable procurement of raw materials due to increased frequency of climate disasters**	Intensifying climate disasters alongside global warming	Instability in raw material procurement	Physical risk	• Reduction in sales due to decreases in production • Increase in raw material costs	• Alternative procurement, diversification of raw material sources, and stockpiling • Acquisition of raw material interests	Decrease in sales of steel due to depletion of raw material inventories	Approx. –¥30 billion per year per 1% decrease in annual sales volume
4°C Scenario Key Factor ❻ **Damages to business bases due to climate disaster**	Intensifying climate disasters alongside global warming	Occurrence of typhoon, heavy rain, and drought damage at manufacturing sites	Physical risk	Reduction in sales due to decreases in production	• Implementation of flood and drought countermeasures at manufacturing sites	Negative impact of flooding and drought on production and sales	No impact due to countermeasures in place
4°C Scenario Key Factor ❼ **Resilience to physical risks**	Intensifying climate disasters alongside global warming	Strengthening of infrastructure and disaster countermeasures	Opportunities	Contributing to improved resilience and longevity of infrastructure	• Strengthening of businesses to meet needs for improving resilience and longevity of domestic and international infrastructure • Increase in sales of infrastructure-related steel products	Increase in segment profit in infrastructure field of the engineering business	Further increase from around ¥12 billion/year under a 1.5°C scenario

*1 Financial impact is solely an estimated figure based on scenario analysis and does not represent actual business performance.

*2 The GX-ETS figure is calculated based on the assumption that 1% of emissions were not met.

Overview of Assessment of Identified Risks and Opportunities and JFE Group's Focus

Timeframe: **Short term (2027)** ⇒until 2027 **Medium term (2035)** ⇒until 2035, **Long term (2050)** ⇒until 2050 (final)

FOCUS Key Factor (1) Decarbonization of Iron and Steelmaking Process

Implementation of innovative technologies to realize large-scale decarbonization

Supply steel materials with high environmental value through implementation of innovative technologies such as electric arc furnaces Opportunity

Short term (2027) **Medium term (2035)**

JFE Steel has actively sought to improve efficiency and decarbonize the iron and steelmaking processes by developing energy-saving technologies and has established process technologies boasting the world's top energy efficiency. Taking advantage of the increasing public demand for decarbonized iron and steelmaking processes, we have the capacity to supply steel products with high environmental value, manufactured by deploying the low-carbon technologies we have developed across our steelworks.

The global drive toward decarbonization is intensifying, and with rising demand to reduce GHG emissions across entire supply chains, interest is rapidly growing for low-GHG emission steel products, particularly in industries such as automotive. In the IEA's Net Zero by 2050 Scenario, the share of steel production using the electric arc furnace method is projected to increase to 37% by 2030 and 53% by 2050. Going forward, demand is expected to expand for steel products made with the electric arc furnace method, which has lower GHG emissions.

During this transition, JFE Steel will introduce innovative electric arc furnaces capable of producing high-performance, high-quality steel materials that could previously only be manufactured using the blast furnace process. In addition, we will cut overall GHG emissions from the steelmaking process by using direct-reduced iron with low carbon emissions.

Since the first half of FY2023, we have been supplying JGreeX™, a brand of GX steel products that significantly reduces GHG emissions in the steelmaking process compared to conventional products. Since it is not immediately possible to achieve zero GHG emissions, we allocate the reductions created by our emission-reduction technologies to selected steel products by applying the mass balance approach and supply them as steel products with environmental value. Going forward, we will contribute to the decarbonization of society by expanding our capacity to supply JGreeX™. To broaden public recognition of these efforts, we are actively lobbying to stimulate demand for steel products with environmental value, while promoting adoption in collaboration with other JISF member companies.

Long term (2050)

Over the long term, to achieve carbon neutrality by 2050, as stated in the JFE Group Environmental Vision for 2050, we are pursuing the development of carbon-recycling blast furnaces (CR blast furnaces), utilization of hydrogen through the direct hydrogen reduction method, and manufacturing methods for high-quality steel using the electric arc furnace method. In particular, the technology that combines a CR blast furnace with CCU is an ultra-innovative technology for achieving net zero CO_2 emissions by drastically reducing CO_2 emissions from the blast furnace process, enabling efficient mass production of high-grade steel and allowing the reuse of CO_2 in the blast furnace. As for the CO_2 that cannot be fully reused in the blast furnace, we are also studying the practical application of carbon capture, utilization, and storage (CCUS) technologies to pursue further reduction potential.

Increased investment burden for electric arc furnaces and ultra-innovative technologies Transition Risk

Short term (2027) Medium term (2035)

The introduction of electric arc furnaces and ultra-innovative technologies carries the risk of increased investment burden to achieve carbon neutrality. At JFE Steel, decisions on the necessary capital investments to achieve the FY2030 GHG reduction target are nearly complete, with about 0.4 trillion yen in GHG reduction investments decided between FY2021 and FY2024. In addition, we estimate that about 0.6 trillion yen of investments will be required by 2035.

Sustaining these large-scale investments will require that we strengthen our revenue base and secure funds for investment and technology development. JFE Steel is promoting research and development using external funds such as the Green Innovation Fund while also lobbying to obtain government support.

In addition, through the expanded sales of JGreeX™, a GX steel product that significantly reduces GHG emissions, we will encourage the market penetration of environmentally valuable products and achieve profitability while protecting the environment. With these initiatives, we will pursue sustainable growth toward realizing a decarbonized society and securing long-term competitiveness.

Long term (2050)

Although the measures to be taken under the 2°C / below 2°C and 1.5°C scenarios will not significantly differ, we must consider scale and scope. In the case of the 1.5°C scenario, it will be necessary to further accelerate the development and implementation of decarbonization technologies, which will require even greater research and development and capital investment expenditures. In addition, the development of infrastructure to stably supply inexpensive, abundant green hydrogen and electric power will be a prerequisite. In addressing these issues, it will be necessary for society as a whole to consider how to share the costs and for the government to formulate long-term strategies for the supply of green hydrogen and electric power, in collaboration with society.

Financial burden will increase due to carbon pricing, and emission reduction targets will be more aggressive and stricter due to environmental changes Transition Risk

Short term (2027) Medium term (2035) Long term (2050)

Countries around the world are introducing and strengthening carbon-pricing and GHG emission reduction systems. In Japan, an emissions trading system (GX-ETS) based on the GX Promotion Act has been launched, creating a regulatory environment in which companies may need to procure emissions allowances depending on their progress toward emission reduction targets. In Europe, the Carbon Border Adjustment Mechanism (CBAM) is now being fully implemented, entailing additional costs based on the carbon emissions associated with imported products.

There is a risk that countries and regions may expand the scope of carbon pricing, increase prices, and further tighten emission reduction targets. These developments could affect steel product manufacturing costs and business earnings. In particular, as policies and regulations in each country are expected to be continually revised toward achieving carbon neutrality by 2050, the JFE Group continuously monitors regulatory trends and changes in market conditions in Japan and overseas.

On the other hand, stronger systems and regulations may help establish mechanisms for appropriately recognizing the market value of low-carbon products such as GX Steel. JFE Steel is actively participating in rule and standard-setting efforts related to carbon pricing systems and GX product markets in Japan and overseas while promoting policy engagement to create markets and generate demand for GX Steel.

Beyond regulatory compliance, the Company is building a business foundation capable of addressing future tightening of emission reduction targets and stronger carbon pricing. It is doing this by continuing to reduce emissions through the introduction of energy-saving and high-efficiency technologies and by advancing the development and implementation of ultra-innovative technologies, including innovative electric arc furnaces and CCUS.

FOCUS Key Factor (2) Increased Need for Effective Utilization of Steel Scrap

Cost of purchasing cold iron sources (scrap/direct-reduced iron) will increase Transition risk

Short term (2027) Medium term (2035) Long term (2050)

The electric arc furnace method, which has low CO_2 emissions, is attracting increasing global attention, and countries are introducing electric furnace facilities. At the JFE Group, in addition to maximizing the use of existing electric arc furnaces, we have decided to introduce an electric arc furnace at the East Japan Works (Chiba District) and an innovative electric arc furnace at the West Japan Works (Kurashiki District). Going forward, demand is expected to increase even further for cold iron sources such as scrap and direct-reduced iron, raising concerns about the risk of higher costs for procuring the cold iron sources needed to maintain steel quality and ensure stable production. We are responding by strengthening collaboration with customers and users in scrap collection to ensure a stable supply of high-grade scrap. We are also advancing research and development to establish technologies for using low-grade and difficult-to-use scrap, to expand the amount of scrap handled and promote the effective use of resources.

In addition, we are taking part in a Middle East direct-reduced iron project to ensure stable procurement of direct-reduced iron. Through these activities, we are reducing procurement risks for cold iron sources while lowering manufacturing costs.

Furthermore, based on the market evaluation of steel products with high environmental value, we are seeking to sustainably operate our business by appropriately passing these costs on to steel prices.

Power demand will increase due to converting from blast furnace process to electric arc furnace process Transition risk

Short term (2027) Medium term (2035) Long term (2050)

Converting from blast furnaces to electric arc furnaces requires large amounts of electric power. In addition to the power needed to melt cold iron sources in electric arc furnaces, power will also be needed to make up for the heat sources previously supplied through byproduct gases generated in blast furnaces and other facilities, which had been used in reheating furnaces and elsewhere within steelworks. Since this increase in power demand involves the risk of higher manufacturing costs, we are working to reduce manufacturing costs at JFE Steel through more efficient processes and technological innovation. Furthermore, based on the market evaluation of steel products with high environmental value, we are seeking to sustainably operate our business by appropriately passing these costs on to sales prices. In addition, stable operation of the electric arc furnace process requires a large and stable supply of power at competitive prices. To this end, we are lobbying the government for stable power supply and pricing and recommending policies for institutional development and reinforcing infrastructure.

FOCUS Key Factor (3) Change in Demand for Automotive Steel

Changes in the product mix due to EV production and other factors

Sales volume of electrical steel sheets for EV motors will increase Opportunity

Short term (2027) Medium term (2035) Long term (2050)

The widening adoption of electric vehicles is expected to change the composition of steel demand. In addition to the expansion of demand for electrical steel sheets for motors, the product mix of steel is diversifying to encompass high-tensile-strength steel for reducing vehicle body weight to offset the additional weight of batteries and stronger frames to protect batteries. At the JFE Group, we view this change as an opportunity and are bolstering our ability to respond. First, as part of strengthening manufacturing capacity for electrical steel sheets, we are proceeding with construction to triple our production capacity of non-grain-oriented electrical steel sheets at the West Japan Works (Kurashiki District) compared to current levels. In addition, we are building a global processing and distribution system for electrical steel sheets to respond to the worldwide expansion of the EV market.

Sales volume of high-strength steel sheets will increase due to improved collision safety Opportunity

Short term (2027) Medium term (2035) Long term (2050)

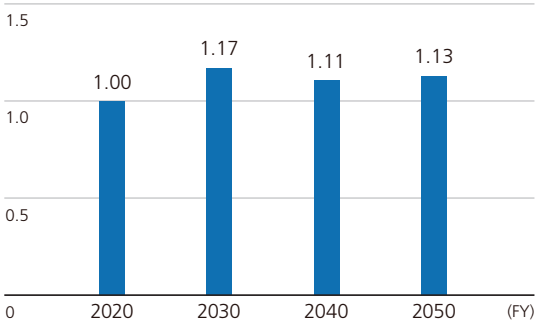
To achieve both weight reduction and collision safety performance, we have decided to construct and are proceeding with construction of a new continuous hot-dip galvanizing line (CGL) at the West Japan Works (Fukuyama District) to expand production capacity for ultra-high-tensile-strength steel sheets. On the product development front, in addition to the commercialization of 1.5 GPa-grade cold-rolled steel sheets, we have developed a multi-material structure that maximizes the performance of steel by incorporating a small amount of resin. This structure sandwiches a highly ductile, strongly adhesive resin between a main component made of ultra-high strength steel and a thin steel plate component, thereby achieving further weight reduction and improved collision safety in automotive body frame components.

Steel sales volume will decrease due to material substitution in multi-material design Transition risk

Short term (2027) Medium term (2035) Long term (2050)

Shifting to materials such as aluminum and carbon fiber reinforced plastics (CFRP) to reduce vehicle weight poses potential risk. These materials have higher manufacturing costs than steel and generate more CO_2 emissions over their life cycle. In the 1.5°C scenario, which assumes the introduction of carbon pricing, the price gap between steel and these materials could further widen. As a result, while the use of multi-material designs is expected to progress to some extent in luxury vehicles, adoption by mass-market vehicles is likely to remain limited. Even if all panel components, such as the doors of luxury vehicles, were replaced with aluminum, the resulting weight reduction would affect only about 5% of the total body materials across both luxury and mass-market vehicles. Taking into account the anticipated increase in automobile production volume, the impact on steel demand for vehicle bodies is expected to remain limited.

Estimated World Demand for Automotive Special Steel



Vertical axis: Steel demand (comparison by year with the year 2020 as 1.00)
Source: Estimated by JFE Holdings based on the reports from METI's Strategic Commission for the New Era of Automobiles

FOCUS Key Factor (4) Increase in Demand for Solutions to Enhance Decarbonization

Increase in demand for decarbonization solution businesses

Expansion of renewable energy-related business Opportunity

Short term (2027) Medium term (2035) Long term (2050)

Demand is expected to continue rising for power generation plants using renewable energy that does not emit carbon. In the engineering business, we are expanding operations through the integrated provision of engineering, procurement, construction, and operation and maintenance (EPC and O&M*[1]) for renewable energy plants, including biomass power generation*[2], geothermal power generation*[3], solar power generation*[4], and wind power generation.

The Japanese government has positioned offshore wind power generation as a pillar of its Green Growth Strategy for realizing carbon neutrality by 2050. In this context, efforts are being promoted on a Groupwide basis, led by JFE Engineering in the manufacture of seabed-fixed foundation structures such as monopiles. We also built Japan's first monopile foundation manufacturing plant, which began operation in April 2024*[5]. The steel business supplies large, heavy plates, and the trading business develops supply chain management, including the provision of information on Taiwan and potential demand regions such as East and Southeast Asia.

In addition to renewable energy, we are focusing on developing and implementing carbon capture, utilization, and storage (CCUS) solutions, as well as commercializing green hydrogen and ammonia-related technologies. Strengthening these initiatives for next-generation technologies will accelerate the delivery of solutions for realizing a decarbonized society and open up business opportunities with high environmental value.

› ***1 The JFE Engineering Corporation's biomass power generation (Japanese only)** (https://www.jfe-eng.co.jp/products/power/ele07.html)

*2 Engineering, procurement, and construction (EPC) and operation and maintenance (O&M) business

› ***3 The JFE Engineering Corporation's geothermal power generation plant** (https://www.jfe-eng.co.jp/en/products/power/gene01.html)

› ***4 The JFE Engineering's solar power generation (Japanese only)** (https://www.jfe-eng.co.jp/products/power/ele05.html)
The JFE Technos Corporation's solar power generation (Japanese only) (https://www.jfe-technos.co.jp/products/solar/)

› ***5 Completion of Japan's first manufacturing base of fixed-bottom foundation (monopile) for offshore wind turbines** (https://www.jfe-eng.co.jp/en/news/2024/20240401.html)

Expansion of waste-to-resource-related business Opportunity

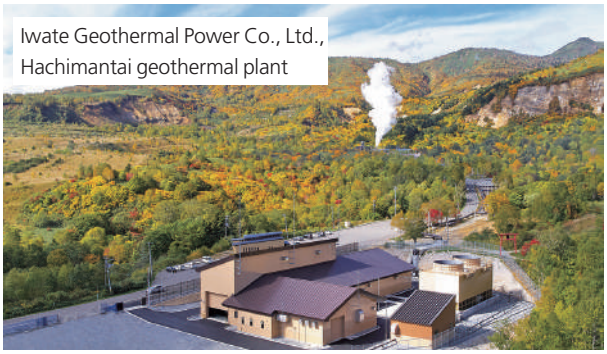
Short term (2027) Medium term (2035) Long term (2050)

From the perspective of resource circulation and effective use, efforts are also underway at waste treatment facilities to increase power generation from waste-derived sources. The engineering business is focusing on fully automated operation*[6] of waste incinerators, which makes it possible to increase power generation. In addition, we are actively engaged in the electricity retail business*[7], which uses renewable energy as the main power source, and supporting the establishment and operation of new regional electricity retail companies*[8], focused on local production and consumption of energy using renewable energy.

JFE Engineering is going beyond conventional energy optimization site by site to develop a Multisite Energy Total Service (JFE-METS)*[9] that optimizes energy by collectively managing multiple sites. This service achieves overall energy savings and reductions in CO_2 by analyzing actual energy consumption at multiple sites, deploying, operating, and optimizing energy-related facilities at each site, and enabling energy interchange, including at remote sites.



Waste-to-energy power generation plant



Iwate Geothermal Power Co., Ltd., Hachimantai geothermal plant

Geothermal power generation plant

› ***6 JFE Engineering's BRA-ING (Japanese only)** (https://www.jfe-eng.co.jp/news/2020/20200727.html)
› ***7 Urban Energy Corporation's electricity retail business (Japanese only)** (https://u-energy.jp/service/retail.html)
› ***8 Urban Energy Corporation's regional electric power support business, targeting local governments (Japanese only)** (https://u-energy.jp/support/)
Regional Electricity Retail Support (P. 72)
› ***9 JFE Engineering's "Multisite Energy Total Service (JFE-METS)" (Japanese only)** (https://www.jfe-eng.co.jp/products/electric-power/electric04.html)

Expansion of low-carbon businesses (eco-solutions) Opportunity

Short term (2027) **Medium term (2035)** **Long term (2050)**

There is ample room in the steel industry for disseminating energy-saving steel technologies (eco-solutions) in countries such as China, which accounts for about 50% of global crude steel production, as well as in India and ASEAN countries, where further economic growth and expanded production are expected. Internationally transferring and deploying advanced energy-saving technologies already in use in Japan is expected to yield a potential reduction of more than 400 million tonnes of CO_2 worldwide in FY2030, of which Japan's contribution is projected to be approximately 80 million tonnes of CO_2.

JFE Steel has launched JFE Resolus™, a solution business that applies the accumulated manufacturing and operational technologies from steelmaking to address issues faced by a wide range of industries beyond the steel industry. As the business environment and marketplace undergo significant change, we are further enhancing our own manufacturing technologies while providing the JFE Group's technologies and know-how under the JFE Resolus™ brand, working in concert with customers to achieve sustainable growth.

› **JFE Steel's Solution Business** (https://www.jfe-steel.co.jp/en/products/solution/)

FOCUS Key Factor (5) Unstable Raw Material Procurement due to Increased Occurrence of Climatic Hazards

Unstable material procurement Physical risk

Short term (2027) **Medium term (2035)** **Long term (2050)**

JFE Steel is taking multiple precautions against the risk of instability in the procurement of steelmaking raw materials associated with climate change. In Australia, a source of our major raw materials, the frequency of cyclones is expected to increase in the future, and our ability to supply steel products could be impacted if production and shipping operations are suspended for an extended period, resulting in a depletion of our raw material inventories. To address this risk, we are strengthening alternative procurement channels and diversifying raw material sources. Specifically, we are gaining flexibility by conducting spot procurement from Chinese port inventories, increasing procurement from nearby sources such as Indonesia, and using multiple loading ports in Australia. We are also mitigating risks of supply interruptions by stockpiling raw materials at Philippine Sinter Corporation, a Group company, and using external yards. In addition, in FY2025, JFE Steel acquired a 10% interest in the Blackwater coal mine owned by Australian steelmaking coal supplier Whitehaven Coal Limited. This is a key means for securing the stable procurement of high-quality raw materials amid increasing difficulty in developing or expanding new steelmaking coal projects.

As the decarbonization of steelmaking processes is expected to foster the diversification of required raw materials, we will continue developing and diversifying procurement sources for those materials with due consideration for climate change risks.

FOCUS Key Factor (6) Damage to Production Bases and Offices Caused by Climatic Hazards

Damage to manufacturing bases from typhoons, heavy rain, and drought Physical risk

Short term (2027) **Medium term (2035)** **Long term (2050)**

We are taking action to minimize damage with the assumption that typhoons and heavy rains will become stronger and that the incidents of disasters comparable to the torrential rain in Western Japan in 2018 will rise. JFE Steel has already implemented flood and drought countermeasures at production sites to minimize the impact of climate-related hazards, and at this point, no significant impacts are anticipated.

Specifically, we have invested approximately 6.5 billion yen in flood disaster prevention at steelworks and completed upgrades to drainage facilities and other precautions. In addition, we have invested approximately 3.5 billion yen in drought countermeasures and introduced seawater desalination equipment at several steelworks. Since the drought disaster of 1994, no severe comparable events have occurred, and we are confident that existing countermeasures are sufficient to maintain stable operations even if their frequency increases.

Furthermore, since all of our steelworks are located along the coast, inundation risks from rising sea levels must also be taken into account. However, the anticipated sea level rise of about 20–30 cm by around 2050 (70 cm by 2100 at the extreme impact of climate change) is not at the scale at which storm surge inundation would occur. Going forward, we will continue to analyze the status of climate-related hazards and strengthen required countermeasures.

FOCUS Key Factor (7) Resilience to Physical Risks

Expansion of business opportunities for infrastructure strengthening and disaster prevention and mitigation measures

Opportunity

Short term (2027) Medium term (2035) Long term (2050)

The JFE Group takes seriously the increased frequency and severity of recent climatic hazards in Japan and overseas. Having one's daily life put in danger is a huge risk. It is our mission to contribute to national resilience and disaster prevention and mitigation measures to maintain vital infrastructure that is essential to daily life and economic activities.

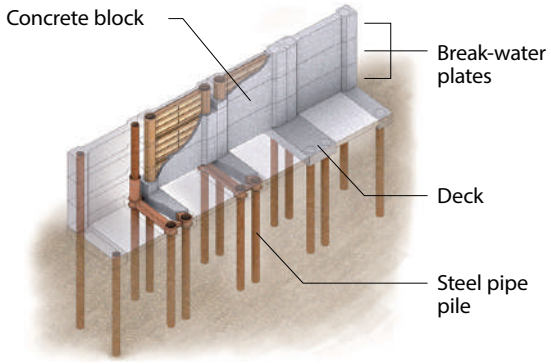
The JFE Group is able to draw upon its collective strengths to contribute in many ways—for example, by protecting key structures from earthquakes using structural steel such as high-strength H-shaped steel and steel pipe piles as well as steel sheet piles, reinforcing embankments that are prone to bursting, and providing disaster prevention products such as hybrid tide embankments and permeable steel slit dams. Our engineering business can also handle a wide range of infrastructure construction projects, including bridges, gas, water and sewage, and pipelines.

JFE Group Products that Contribute to Climate Change Adaptation

- Hybrid Tide Embankments

Hybrid tide embankments are made of steel and concrete. Because of their hybrid structure, they require shorter construction time and less space.

Concrete blocks for hybrid tide embankments are precast at a JFE Group factory, while steel pipe piles for foundations are installed at the construction site, thereby reducing the time required for on-site construction by about 60%. This arrangement does not require large amounts of materials, equipment, or workers on site, so it does not interfere with other construction work. Furthermore, compared to a conventional embankment structure, the land area occupied by the embankment can be reduced by about 80%, saving considerable space.



Cross section



Hybrid tide embankments

› **JFE Engineering: Hybrid Tide Embankments (Japanese only)** (https://www.jfe-eng.co.jp/products/bridge/steel-structure03.html)

Permeable Steel Slit Dams

A permeable steel slit dam is a steel pipe structure installed in a river to trap debris flows. Made of strong steel pipes to withstand the impact of driftwood and huge debris, it has large openings to let water and sediment to pass through, which prevents the water level from rising upstream during floods and also ensuring that debris does not flow downstream. Since it does not block the flow of water, unlike a dam, it can be shaped to the slope of a riverbed to protect the ecosystem. The JFE Group is working to expand the use of permeable steel slit dams by reducing installation costs and shortening the construction period through structural innovations.



Permeable steel slit dams

› **J Slit Dam – JFE Metal Products Corporation** (https://jfe-kenzai.co.jp/en/products/j-slit-dam/)

Terre Armée Method

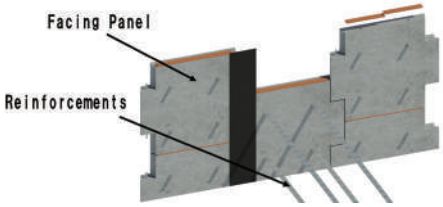
The Terre Armée method involves reinforced soil wall construction in which layers of steel reinforcements are laid within an embankment to create a vertically strong structure with excellent earthquake resistance. The robust yet flexible structure formed by interaction between the embankment and the reinforcements helps suppress sediment-related disasters from increasingly severe natural hazards (heavy rainfall and major earthquakes) and supports the maintenance of critical lifelines.

JFE Shoji Terre One Corporation, a subsidiary of JFE Shoji, will continue to contribute to building disaster-resistant roads and communities by promoting the Terre Armée method and expanding sales of other products that contribute to disaster prevention and mitigation and strengthen national resilience.





Exterior view of a Terre Armée structure



Internal structure of the Terre Armée method

› **JFE Shoji Terre One Corporation: Terre Armée Method (Japanese only)** (https://www.terrearmee.com/terrearmee/)

Links to Information about the JFE Group Environmental Vision for 2050 and Climate Change Scenario Analysis

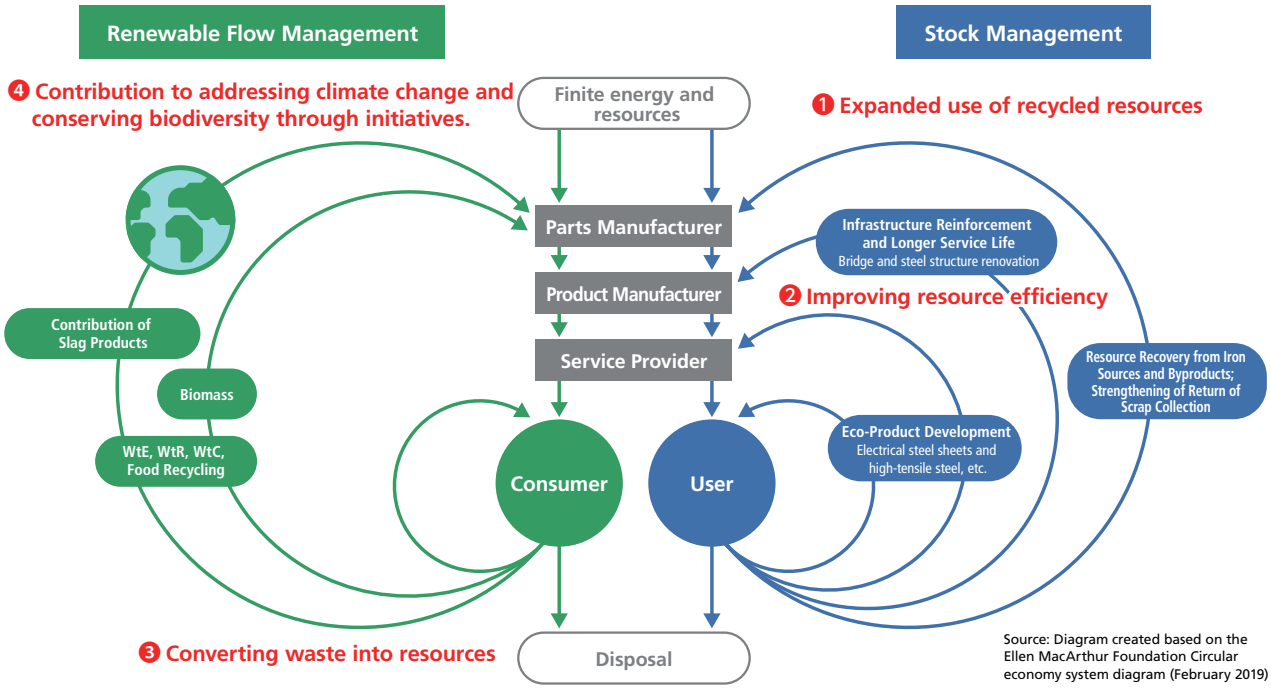
› **Commitment to a Low Carbon Society: Policy Engagement** (P. 89)
› **Targets and Results Related to Climate Change: FY2025 KPI Results and FY2026 KPIs** (P. 19)
› **Initiatives on Climate Change: Initiatives to Address Climate Change** (P. 49)

Initiatives to Transition to a Circular Economy

Basic Policy

The JFE Group views transition to a circular economy as indispensable for realizing a sustainable society, and we are taking action to shift the overall economic system of society from a conventional linear economy to a circular economy. In these efforts, we are using digital technologies and collaborating with government, municipalities, and customers throughout the value chain, extending beyond the Group's framework. We will focus on reducing resource use, improving resource-use efficiency, and reducing waste while also strengthening our activities from three perspectives: converting byproducts and waste into resources, developing eco-product/eco-solution technologies with high resource efficiency, and expanding the use and sales of recycled resources. These activities will also contribute to addressing environmental issues such as climate change and biodiversity conservation.

Circular Economy Concept and Initiatives



Source: Diagram created based on the Ellen MacArthur Foundation Circular economy system diagram (February 2019)

Iron is easily recovered, highly recyclable, and can be infinitely recycled as raw material for the same steel products. The JFE Group is also recovering and using steel scrap as well as developing initiatives for transitioning to a circular economy.

Our steel business is promoting the use of recycled resources by effectively using byproduct resources such as dust, sludge, and slag generated in the steelmaking process and using waste plastics as blast furnace raw materials. We are also improving resource efficiency by providing high-quality, high-performance steel products.

Our engineering business is delivering solutions for resource circulation by constructing plant and infrastructure facilities such as biomass fuel plants for food waste and sewage sludge, and waste-to-energy plants, as well as operating and managing these facilities on consignment. In addition, we are promoting a circular economy through recycling businesses for PET bottles and plastics, and energy supply businesses.

Our trading business is procuring environmentally sound materials such as biomass fuel by drawing upon our supply chain management network.

In addition, all of the JFE Group's major production sites in Japan, comprising seven JFE Steel sites and three JFE Engineering sites, have established water management plans and monitor water intake and discharge volumes and recycling volumes in order to manage water resources and reduce environmental impact. Since the steelmaking process consumes large volumes of fresh water for cooling and cleaning products and facilities, the efficient use of water resources, taking into account the impact on water sources and surrounding stakeholders, is a key issue. In response, we are reducing water intake by building systems to purify and recycle used water as much as possible at steelworks. We are also raising employee awareness of water conservation and continuously minimizing environmental impact through reduced and more efficient water use.

Furthermore, we place priority on maintaining a safe and sanitary water environment in the areas surrounding our manufacturing sites, implementing measures to protect water quality to have the least possible impact on local water resources, and actively preserving the living environment of local residents.

For details on the recycling businesses of JFE Steel and JFE Engineering, please see:

› **List of JFE Group Recycling Businesses in Japan** (https://www.jfe-holdings.co.jp/en/common/pdf/sustainability/environment/resource/resource01.pdf)

Endorsing and Participating in External Initiatives

To accelerate the transition to a circular economy, JFE Holdings participates in the Japan Partnership for Circular Economy (J4CE), established by the Ministry of the Environment, the Ministry of Economy, Trade and Industry, and the Japan Business Federation. J4CE is a public-private platform through which companies, industry associations, municipalities, government agencies, and other organizations collaborate to foster understanding of the circular economy, share best practices, and promote collaboration among businesses.

Within the JFE Group, J&T Recycling Corporation, a member of the JFE Engineering Group, also participates in J4CE and is advancing initiatives to promote a circular economy, drawing on its expertise in waste treatment and resource circulation. Through its participation in J4CE, the JFE Group will apply its knowledge of domestic and international policy and technology trends and best practices related to resource circulation, communicate its recycling and resource-circulation initiatives, and contribute to building a recycling-oriented society through collaboration with diverse stakeholders.



› **Japan Partnership for Circular Economy** (https://j4ce.env.go.jp/en)

JFE Group Strategy for Transition to a Circular Economy

To accelerate the transition to a circular economy, we believe it is important to establish mechanisms that optimize resource circulation across society by linking arterial industries that supply materials and products with venous industries responsible for collection and recycling. This will require not only collaboration among companies but also the development of rules, infrastructure, and market conditions involving government agencies and municipalities. The JFE Group will advance initiatives to enhance resource circulation through dialogue and collaboration with relevant stakeholders.

The JFE Group also views the circular economy as more than merely an effort to reduce waste and use resources efficiently; it represents a growth opportunity for creating new value from recycled materials and circular resources. Expanding the use of recycled resources and enhancing their functionality will increase the environmental and GX value generated through resource circulation while contributing to the creation of sustainable materials and product markets.

In addition, amid rising geopolitical risks and growing demand for critical minerals, resource circulation is becoming increasingly important not only for addressing environmental issues but also from the perspective of economic security. By effectively using recycled resources and developing resource-circulation networks, the JFE Group will contribute to reducing dependence on natural resources and securing stable supplies of resources, thereby supporting the development of resilient social infrastructure.

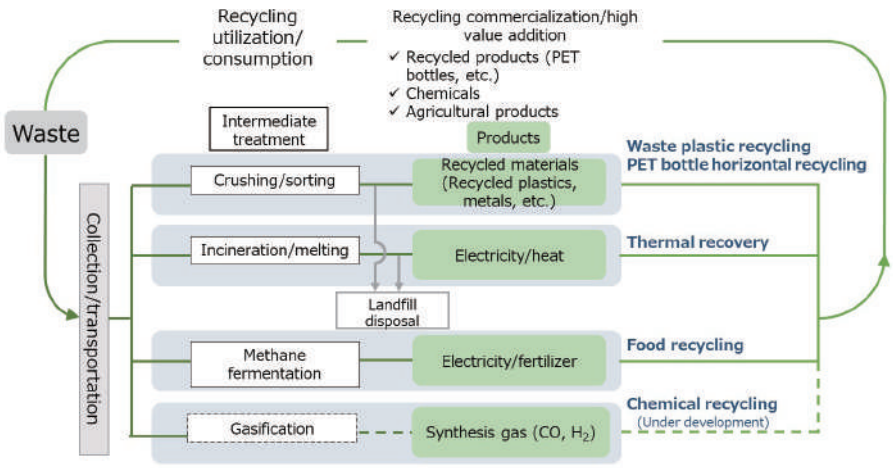
Conversion of Byproducts and Waste into Resources

The JFE Group incorporates the circular economy concept into its business activities to ensure the responsible use of limited resources, reduce environmental impact, and realize a sustainable society. In particular, we are reusing byproducts and waste as new resources as ways to circulate resources and minimize waste.

EN Building a Recycling Value Chain

As one of Japan's leading companies capable of providing one-stop solutions from the collection and transportation of waste to the intermediate treatment and recycling of recovered products, JFE Engineering is striving to establish a recycling value chain, including collaboration with partner companies and municipalities.

Recycling Value Chain



We are engaged in waste-plastic recycling, horizontal recycling of PET bottles, thermal recovery, food recycling, and chemical recycling.

We also support new regional power companies that locally produce and consume energy derived from waste, including electricity generated from waste-to-energy facilities and biogas power generation through food recycling (P. 72). For JFE Engineering, this is an important initiative for the circular economy as well as carbon neutrality.

EN Promoting Plastic Recycling

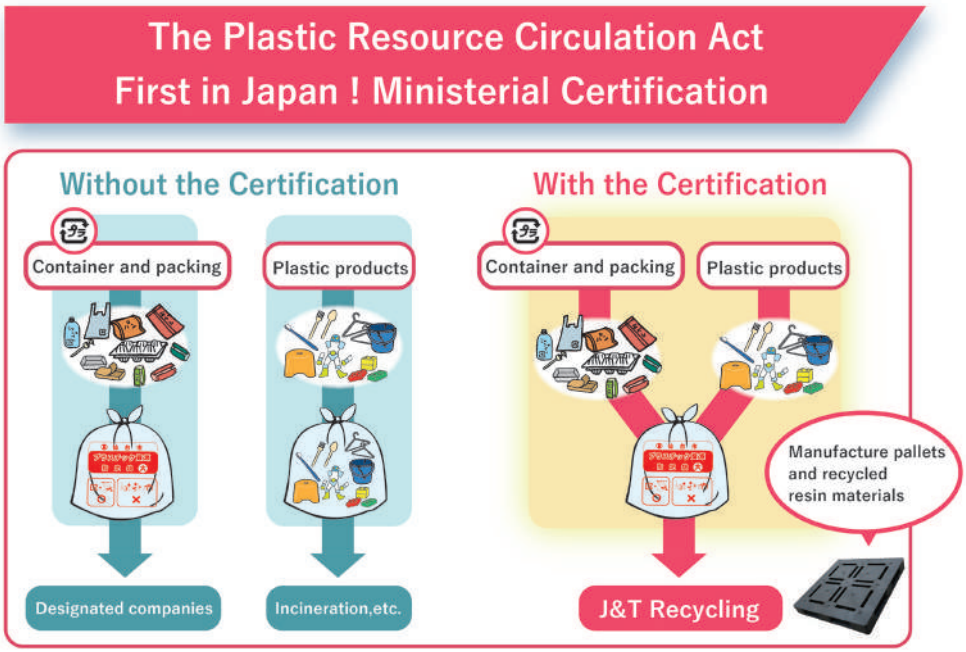
J&T Recycling Corporation joined the recycling plan formulated by Sendai City under the Plastic Resource Circulation Act in September 2022 and, for the first time in Japan, obtained certification from both the Minister of the Environment and the Minister of Economy, Trade and Industry. Following this, in April 2023, the company launched the integrated collection of plastic products. In Sendai, product plastics that had previously been incinerated can now be collected with plastic containers and packaging for more efficient recycling.

In July 2023, J&T Recycling Corporation and the JR East Group jointly established J Circular System Corporation in Kawasaki, Kanagawa Prefecture to promote plastic recycling in Japan. This facility, one of the largest in Japan, can process 200 tonnes of used plastics per day and is set up to handle the entire process, from sorting to recycling into new products. The plant began full-scale operation in April 2025 and can directly accept unsorted used plastics collected by municipalities and businesses. This makes it possible to recycle used plastics that had previously been incinerated because they were difficult to sort. The collected used plastics are subjected to advanced sorting and, depending on their characteristics, are recycled through material recycling or chemical recycling in collaboration with nearby recycling businesses, thereby enhancing resource circulation.

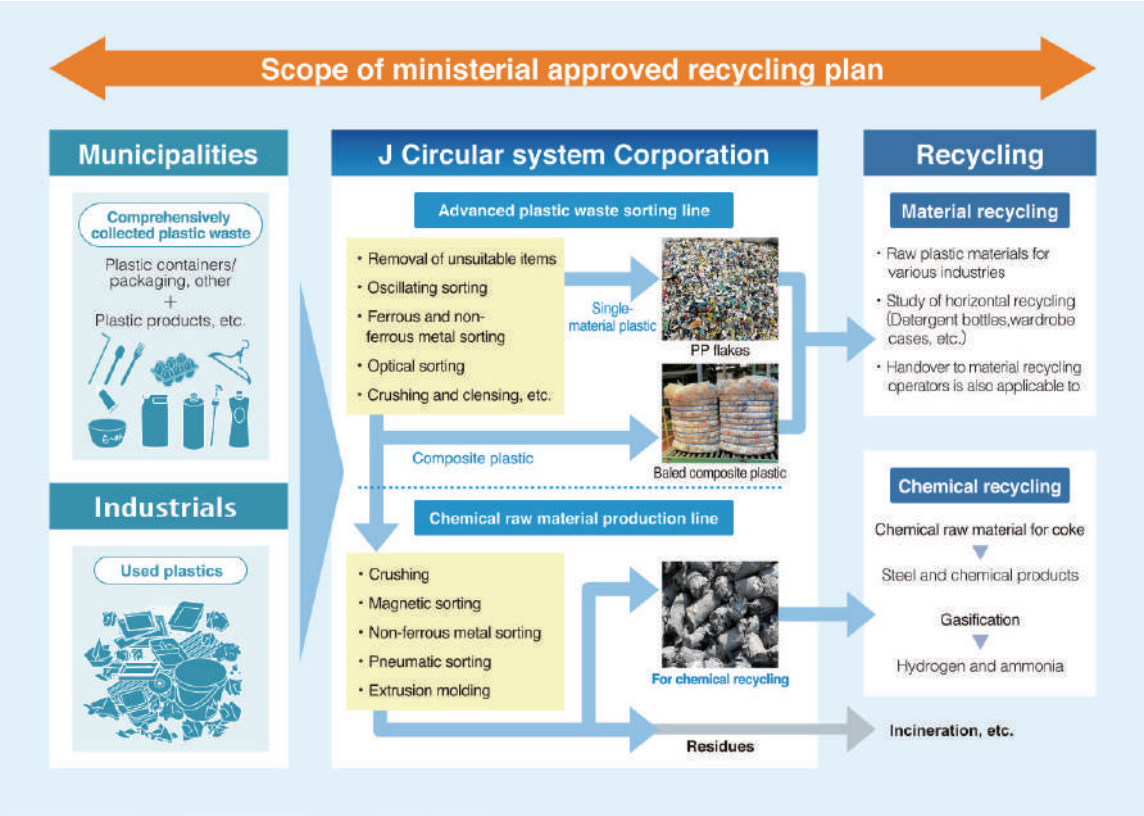
At present, recycling plans formulated under the Plastic Resource Circulation Act by Kawasaki City, Fujisawa City, Yokosuka City, and Ota Ward have received ministerial certification, and this is the first case in Japan where certification has been obtained through the collaboration of multiple municipalities and recycling businesses. With this certification, a large portion of the used plastics separated and collected as household waste from municipalities and citizens can now be recycled at this facility.

With its unprecedented recycling system, J Circular Systems aspires to become a forerunner in advanced plastic resource circulation and in promoting decarbonization while contributing to the realization of a sustainable, recycling-oriented society.

Ministerial Certification of the Recycling Plan in Sendai City



Scope of Municipal Recycling Plans Related to J Circular Systems





J Circular Systems Kawasaki Super Sorting Center

- **Japan's First! J&T Recycling Corporation Participates in Sendai City's Plastic Waste Recycling Project**
  (https://www.jt-kankyo.co.jp/en/topics/2022/10/20221003.html)
- **Full-Scale Operation Begins at J Circular Systems, One of Japan's Largest Plastic Recycling Facilities, Recycling Used Plastics from Residents of Three Municipalities in the Tokyo Metropolitan Area (Japanese only)**
  (https://www.jfe-eng.co.jp/news/2025/20250313.html)

EN Horizontal Recycling of PET Bottles

Kyoei J&T Recycling Corporation*1, a subsidiary of J&T Recycling Corporation, launched its flake manufacturing plant in October 2021 and completed its pellet production line in April 2022 to begin full-scale commercial operation. Its bottle-to-bottle (B-to-B) technology facilitates repeated recycling (closed-loop/horizontal recycling) an unlimited number of times, achieving a 63% reduction in CO_2 compared to the production of PET bottles from crude oil (calculated by Mitsubishi UFJ Research and Consulting Co., Ltd.), and was included as an example*2 of addressing resource and environmental constraints in the White Paper on Manufacturing Industries (Monozukuri) 2010, published by the Ministry of Economy, Trade and Industry.

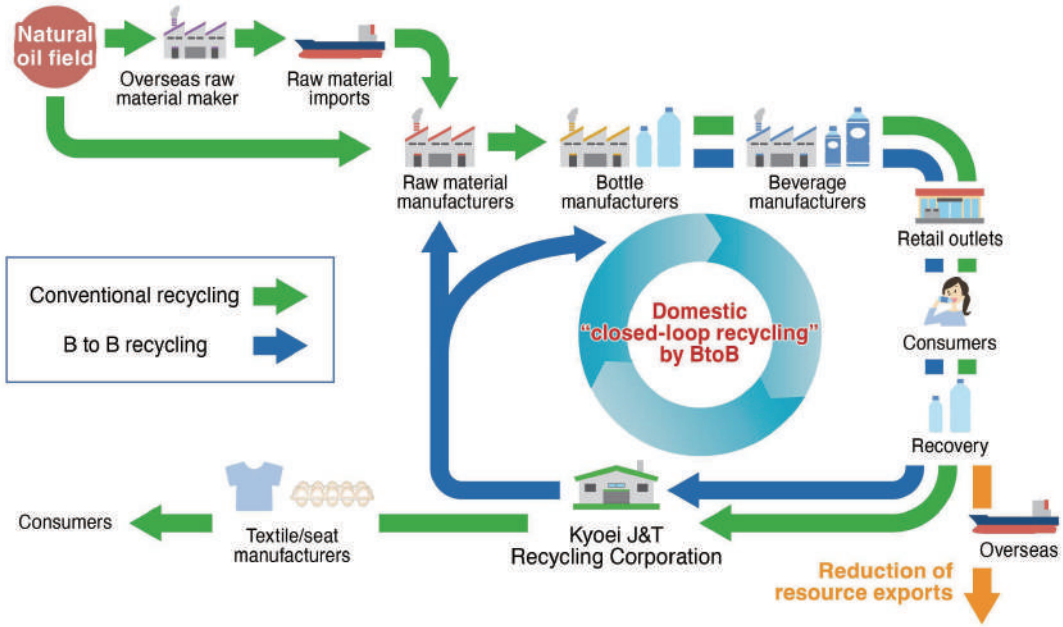
Beverage manufacturers and retailers are pursuing a variety of ways to boost the recycling rate of PET bottles (B-to-B). In response to these needs, the B-to-B business of Kyoei J&T Recycling significantly contributes to realizing a circular economy and reducing CO_2 emissions by curbing the use of natural resources.

*1 A joint venture of J&T Recycling Corporation and Kyoei Sangyo Co., Ltd.
*2 By Kyoei Sangyo Co., Ltd.



Exterior of the West Japan PET Bottle MR Center

Horizontal Recycling Flow of PET Bottles



> **Kyoei J&T Recycling Corporation's West Japan PET Bottle MR Center Begins Full Commercial Operations**
(https://www.jt-kankyo.co.jp/en/topics/2022/04/20220421.html)

> **Establishment of Joint Venture between J&T Recycling Corporation and Kyoei Sangyo Co., Ltd. — Construction of Japan's Largest PET Bottle Recycling Resin Plant Contributing to the Shift to B-to-B (Japanese only)**
(https://www.jfe-eng.co.jp/news/2020/20200507.html)

EN Construction and Operation of Waste-to-Energy Plants Overseas (Thermal Recovery)

JFE Engineering and the Thuan Thanh Environment Joint Stock Company*1 (TT) jointly established T&J Green Energy Company Limited (T&J) to conduct a waste-to-energy business in Bac Ninh Province, Vietnam.

After the establishment of T&J, JFE Engineering was responsible for plant design, construction, and operation, while TT handled the obtaining of permits and approvals, securing the plant site, collecting and transporting waste for incineration, and treating incineration ash. The waste-to-energy plant incinerates 500 tonnes per day of municipal and industrial waste and has a power output of 11.6 MW. Electricity generated, excluding power consumed on site, is sold to Vietnam Electricity Corporation under the feed-in tariff (FIT) system.

Funding for the construction and operation of the T&J plant was provided through the equipment subsidy program under the Japanese government's Joint Crediting Mechanism (JCM), together with loans from the International Finance Corporation (IFC) of the World Bank Group and the Finland–IFC Blended Finance for Climate Program.*2

This financing package was based on recognizing the project's proper waste treatment and an expected reduction of approximately 600,000 tonnes of GHG emissions over 15 years. The project was implemented in cooperation between the governments of Vietnam and Japan. Both companies plan to use this project as a starting point for launching similar efforts.

Drawing from the JFE Engineering Group's experience in the construction and operation of waste treatment plants, we will continue to contribute to the realization of a resource-recycling society by promoting business planning, construction, and operation in this field in Japan and overseas.

*1 A major recycling company in Vietnam is comprehensively engaged in waste incineration and other recycling businesses.
*2 Refinanced by a local bank at present.



Waste-to-energy facility in Bac Ninh Province, Vietnam

EN Recycling Food Waste

J&T Recycling Corporation aims to create locally produced and locally consumed resource-circulation systems and operates food recycling power generation businesses* at six locations nationwide.

Recycling rates tend to decline further downstream in food distribution. One reason is that food waste generated by downstream industries often contains foreign materials such as containers, disposable chopsticks, and toothpicks. The food-recycling systems promoted by J&T Recycling can process food waste containing such materials, which was previously considered difficult to recycle, thereby helping to raise the recycling rate of the industry as a whole.

The basic treatment flow is common to each plant: food waste is converted into methane through microbial action, and the resulting biogas is used as fuel to generate electricity with gas engines. We have used this system to establish two recycling loops, one for electricity and one for agriculture.

The electricity recycling loop returns electricity generated from food waste to waste generators. Under a power purchase agreement between waste generators and Urban Energy Corporation (UEC), JFE Engineering's electricity-retailing subsidiary, waste generators receive renewable energy equivalent to the electricity generated from their food waste. They can also use Soudenwari™, a service that provides a discount on electricity charges equivalent to the electricity generated based on the volume of waste accepted.

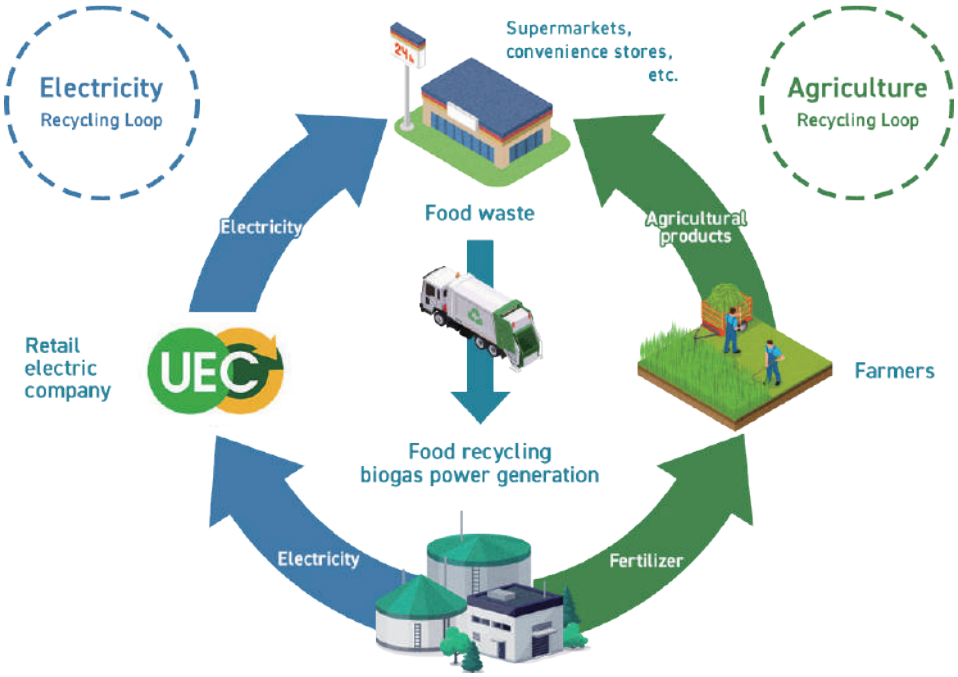
In the agricultural recycling loop, farmers use the residue generated during fermentation as fertilizer, and the crops grown with that fertilizer are in turn used by the waste generators. Food waste generated by those businesses is subsequently treated again by J&T Recycling, completing the cycle.

J&T Recycling aims to realize a Regional Circular and Ecological Sphere by promoting a double recycling loop that combines the electricity recycling and the agricultural recycling loops.

The JFE Engineering Group will continue to work with local communities to promote improved food recycling rates and local production and consumption of renewable energy, contributing to the realization of a recycling-based society.

› ***Food recycling business of the J&T Recycling Group** (https://www.jt-kankyo.co.jp/en/business/#sec03)

Double Recycling Loop: Creating Renewable Energy and Fertilizer from Food Waste





Food recycling power generation plant (J Bio Food Recycling)

EN Development of a Waste Chemical Recycling Technology (C-PhoeniX Process™) through the Use of the Green Innovation Fund

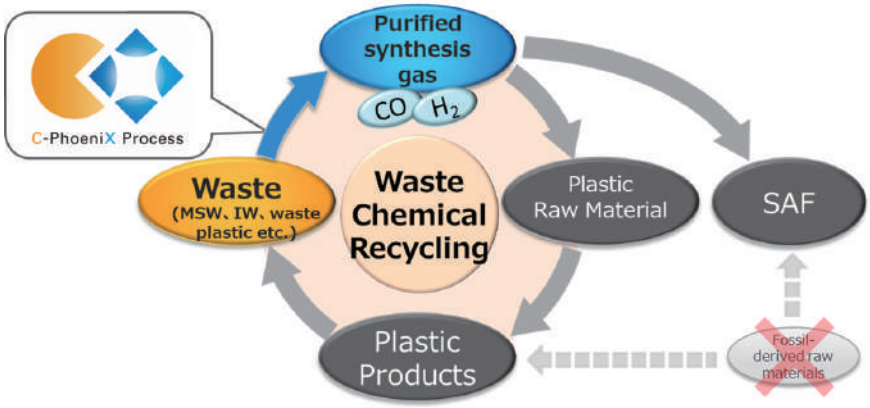
In February 2024, JFE Engineering was selected as an implementing organization for NEDO's Green Innovation Fund Project, "Achieving Carbon Neutrality in the Waste and Resource Circulation Sector."*1 Following more than two decades of trial and error, JFE Engineering established a technology to gasify a wide range of waste, including municipal waste. The company has the world's only long-term operational record for this technology. It is currently developing a new gasification technology, C-PhoeniX Process™ (or CX Process™), to further improve the technology toward achieving carbon neutrality. The C-PhoeniX Process™, based on the company's accumulated technological expertise, maintains the ability to process waste reliably while enhancing its capability to stably produce high-quality, purified synthesis gases, consisting primarily of hydrogen and carbon monoxide, from a wide range of waste materials. Once established, this technology will be applicable to the waste-to-chemical (WtC) process, enabling many types of waste to be recycled for different purposes, including the production of plastic, sustainable aviation fuel (SAF), and hydrogen.

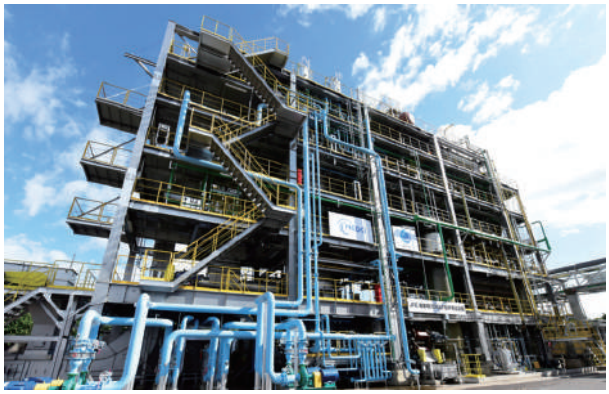
Under this Green Innovation Fund project, demonstration testing using a small-scale furnace (20 tonnes/day) began in December 2025,*2 and steady progress has been made with the new gasification technology. Building on the results of this demonstration, we plan to conduct a large-scale demonstration combining technology for producing purified synthesis gas from waste with technology for producing high-value-added chemicals from the gas. With government support, we will further accelerate development and social implementation of the entire WtC process in addition to the C-PhoeniX Process™. JFE Engineering aims to complete the development by FY2030 and deploy it in Japan as well as overseas, thereby contributing to the achievement of carbon neutrality by 2050.

› ***1 NEDO launches its Green Innovation Fund Projects to Achieve Carbon Neutrality in the Waste and Resource Circulation (Japanese only)** (https://www.nedo.go.jp/news/press/AA5_101724.html)

› ***2 Demonstration Testing Begins to Convert Waste into Chemical Feedstock Using an Innovative Gasification and Reforming Process** (https://green-innovation.nedo.go.jp/en/article/resource-circulation/)

Overview of Waste Chemical Recycling





Small-scale demonstration facility

› **Developing the Advanced Waste-to-Chemical Gasification Process, the "C-PhoeniX Process™" Towards Practical Use in Society** (https://www.jfe-eng.co.jp/en/news/2024/20240207.html)

ST Utilization of Byproducts Generated in the Steelmaking Process (Dust, Sludge, Slag)

JFE Steel carefully controls the generation and emission of iron and steelmaking slag (a co-product), iron dust from blast furnaces and converters, sludge from water treatment facilities, and other co-products by setting targets to improve recycling rates. Dust and sludge with high iron content are recycled as raw materials for steelmaking. Iron and steelmaking slag is effectively recycled for reuse in cement and other construction materials. The company is also promoting its use as environment recovery material such as Marine Stone™, which works effectively as a base for the adhesion of organisms and for improving the marine environment. As a result of these efforts, it achieved a 99.6% recycling rate for dust, sludge, and slag in FY2025, fulfilling the target of at least 99%, and it remains committed to consistently achieving the target.

For more quantitative data related to co-products, please refer to:
› **Environmental Data** (P. 273)

Contribution of Steel Slag Products

Many steel slag products are designated as specified procurement items (products that contribute to the reduction of environmental impact) for public works under the Act on Promotion of Procurement of Eco-Friendly Goods and Services by the State and Other Entities (Act on Promoting Green Procurement), which came into force in 2001 to protect the natural environment.

To realize a circular economy, JFE Steel has set a target under the Eighth Medium-term Business Plan (FY2025–FY2027) for using a cumulative total of 320,000 tonnes of steel slag products for marine applications, in order to contribute further to the conservation of natural resources (sand and stone). We will further expand this effort. Actual usage was 78,000 tonnes in FY2025.

● Calcia Improvement Material

Calcia improvement material is a slag product that uses converter-type steelmaking slag as raw material and is manufactured by controlling the composition and adjusting particle size. Dredged soil mixed with calcia improvement material is called calcia improved soil, which is stronger than the original weak dredged soil and is therefore able to prevent dredged soil from dissipating into the surrounding area and having a negative environmental impact when placed in water. As a construction material for infrastructure development, it can be applied to landfill materials and other uses, enabling the effective use of dredged soil. Calcia improved soil has been used as material for a mid-section submerged breakwater*1 (Shin Honmoku Pier, Port of Yokohama), backfill material for earthquake-resistant quay walls (Fukuyama Port Minooki district quay wall construction project), and soil for bank protection (Tokyo new landfill site development project).

Calcia-improved soil can also be used for creating shallow waters and tidal flats and backfilling deep excavated holes, as a technology that can restore marine environments.*2

*1 An embankment built under the water surface on the inside of a perimeter wall to divide the land into sections for reclamation.

› ***2 Biodiversity Conservation and Nature Positive** (P. 154)

Calcia Improvement Material and Calcia Improved Soil





Example of calcia improvement soil application (landfill material)

Steel Slag Hydrated Matrix

Steel slag hydrated matrix is a slag product that can be used as a substitute for concrete but uses ground granulated blast furnace slag instead of cement, and steelmaking slag instead of natural gravel and sand aggregate, as its ingredients. It effectively uses steel slag and does not rely on natural aggregate, thereby reducing environmental impact, and uses less cement, in turn reducing CO_2 emissions.

There are many examples of blocks and artificial stones made from steel slag hydrated matrix being used as a substitute for concrete blocks and natural stones in harbor works, apart from the expected application for scour-prevention at the growing number of offshore wind-power stations to be constructed in the near future. In addition, we are conducting on-site monitoring in the Katsunan Central Zone of Chiba Port with the help of a local fishing association and have confirmed benefits for biodiversity.



Block made from Steel Slag Hydrated Matrix (wave-dissipating and foot protection block)

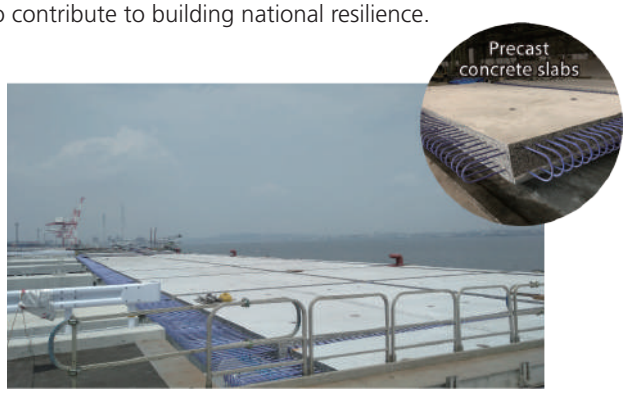


Artificial stones made from steel slag hydrated matrix

Precast Concrete Products Mixed with Blast Furnace Slag Fine Aggregate

Blast furnace slag fine aggregate, which hardens like cement, can be used in concrete. This type of concrete exhibits significantly higher durability under harsh conditions such as applications in sewers and exposure to anti-freeze agents. Its effectiveness in reducing environmental impact is widely understood, although there has recently been growing interest in its practical applications for concrete constructions that require higher durability.

As one of the deliverables for the Japanese government's Strategic Innovation Promotion Program, the Japan Society of Civil Engineers published a draft guideline in March 2019 on the application of blast furnace slag fine aggregate to precast concrete products, and its application now includes precast concrete slabs installed in highways and piers. With the application of blast furnace slag fine aggregate in concrete, the durability of precast products is expected to be greater and their quality more consistent, allowing them to contribute to building national resilience.



Precast concrete slabs mixed with blast furnace slag fine aggregate installed in piers

Granulated Blast Furnace Slag

Granulated blast furnace slag, when ground to a fine powder and used to replace part of ordinary Portland cement, reduces the amount of limestone, crushed stone, and sand used, saves energy, and can also reduce CO_2 generated in cement production. For example, blast furnace cement made by replacing 45% of ordinary Portland cement with granulated blast furnace slag reduces CO_2 emissions per tonne of cement produced by 42%. In FY2025, JFE Steel supplied approximately 5.72 million tonnes of granulated blast furnace slag to cement production, equivalent to a reduction of about 4.05 million tonnes of CO_2 emissions.

CO_2 Emissions for Producing 1 Tonne of Cement (Unit: kg- CO_2/tonne)

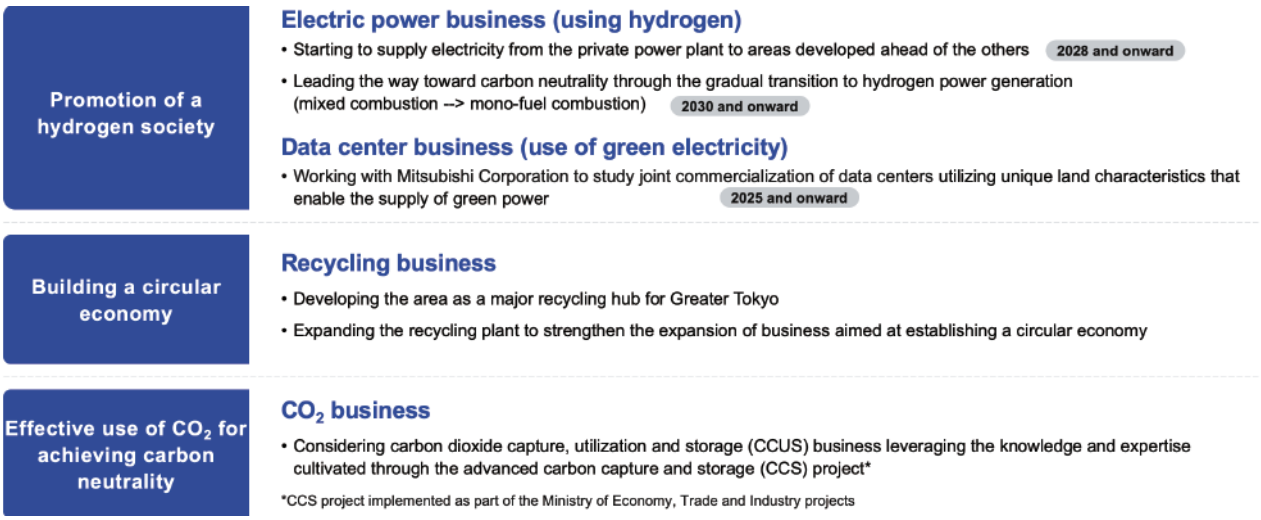
CO_2 Emissions Source	Ordinary Portland Cement	Blast Furnace Slag Cement
Limestone	476	270
Electricity/energy	283	170
Total	759	440

Source: Data published by the Japan Cement Association in 2022, and "Environmental Materials" published by the Nippon Slag Association

Initiatives for Realizing a Circular Economy in the Keihin Waterfront Area

Taking advantage of its proximity to Tokyo, the Mizue district is collaborating with Kawasaki City in expansion and development to create a major recycling hub for the metropolitan area. J&T Recycling Corporation, a group company of JFE Engineering, partnered with JR East and others to establish J Circular System Corporation in a pioneering project to construct the J Circular Systems Kawasaki Super Sorting Center as one of the largest plastic recycling facilities in Japan. Full-scale operations commenced in April 2025. Going forward, we will continue to promote businesses toward realizing a circular economy through the expansion and development of the recycling area.

Keihin District Land Business Utilization (from Materials of the Eighth Medium-term Business Plan)



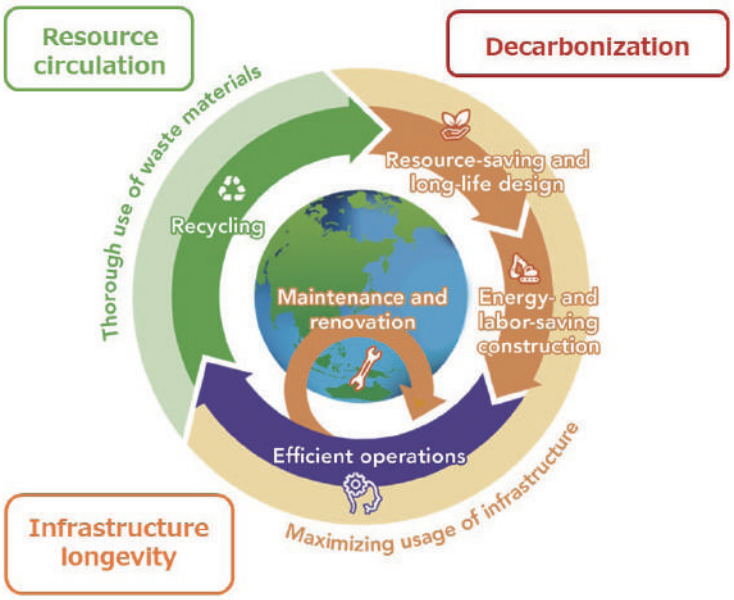
Development of Resource-Efficient Eco-Products and Eco-Solutions

The JFE Group is developing and providing resource-efficient products and services to support the realization of a circular economy. We are deploying eco-products designed from the perspective of the entire life cycle and eco-solutions that create circular value to reduce environmental impact and effectively use resources.

EN Infrastructure Reinforcement and Longer Service Life

JFE Engineering is leveraging its diverse business portfolio to promote multifaceted efforts for transitioning to a circular economy. In the infrastructure field, we are helping to realize a sustainable society through projects that maximize the useful life of infrastructure through resource-saving and long-life design, energy- and labor-saving construction, and efficient operation through maintenance and renovation.

JFE Engineering Circular Economy



Toward Realizing Bridges with Longer Service Life

Japan's stock of social infrastructure is expected to age rapidly in the coming years. At the same time, declining birth rates, an aging society, and population decline are reducing the available labor force, making it increasingly difficult to secure engineers for infrastructure maintenance. To address this, JFE Engineering is working to lessen the burden of maintenance by using highly durable materials to construct bridges with longer service life.

Technology Allowing for Bridges with Longer Service Life

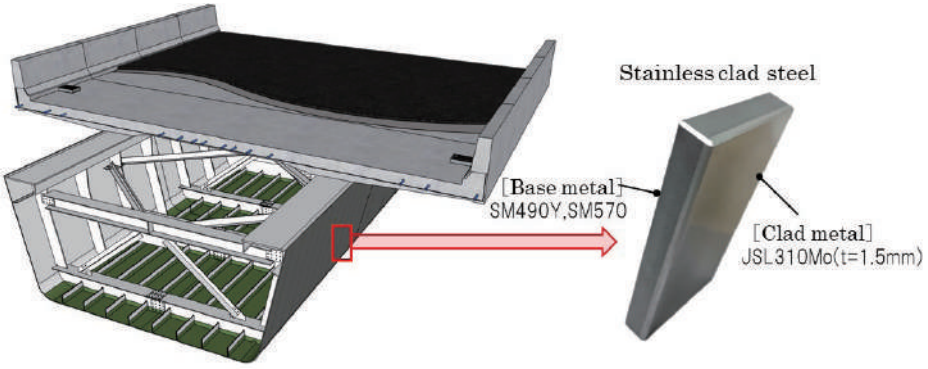
Conventional steel bridges suppress corrosion by using coatings such as paint that must be periodically reapplied. Using highly durable materials that do not need to be coated eliminates the need for reapplications, significantly reducing maintenance tasks associated with ordering, design, construction, and management. Moreover, these bridges demonstrate superior cost savings over a 100-year life cycle compared to painted bridges. We have thus pioneered the use of stainless clad steel for constructing a road bridge.

Stainless clad steel is a steel plate with a two-layer structure, combining ordinary steel (carbon steel) and stainless steel. Stainless steel is placed on the outer surface, which is susceptible to salt damage, while painted carbon steel (base material) is used on the inner surface, which is less susceptible to corrosion. A stainless clad steel bridge is more economical than bridges made entirely of stainless steel and more durable than those made entirely of carbon steel, thereby combining economy and durability.

The clad steel selected for this project uses JSL310Mo, a stainless steel with extremely high corrosion resistance, to extend service life. This seawater-resistant stainless steel was uniquely developed by JFE Steel as a material for clad steel, and JFE Engineering is a pioneer in fabrication and construction technology for steel structures using clad steel. This one-of-a-kind long-life bridge was possible through the combined strengths of the entire JFE Group.

The bridge is currently under construction as part of the replacement work for the Tedori River Bridge on the Hokuriku Expressway, commissioned by Central Nippon Expressway Company Limited.

Bridge Using Stainless Clad Steel



ST Contributing to Extending the Service Life of Steel Structures through FLExB™ Welding, Which Improves Fatigue Resistance

A new welding method developed by JFE Steel to improve the fatigue resistance of steel structures, FLExB™ Welding*1, has been adopted for the first time in the National Route 8 Miyukibashi Bridge Superstructure Widening Project of the Kinki Regional Development Bureau, being constructed by Komaihaltec Inc. FLExB™ Welding is registered with the Ministry of Land, Infrastructure, Transport and Tourism's New Technology Information System (NETIS) (CB-230007-A).

Steel structures used over long periods require lower maintenance and renewal costs as they age. Bridges in particular are repeatedly subjected to traffic loads from automobiles and other vehicles, creating a risk of fatigue damage in the form of fatigue cracks at welded joints. To address this issue, JFE Steel developed a new welding method that improves resistance to fatigue damage at welded joints in bridges and other steel structures. Applying the method to wrap-around welds, such as those on the short sides of gusset plates (reinforcing steel plates), where fatigue cracks tend to occur, improves durability against fatigue damage and contributes to extending structural service life.

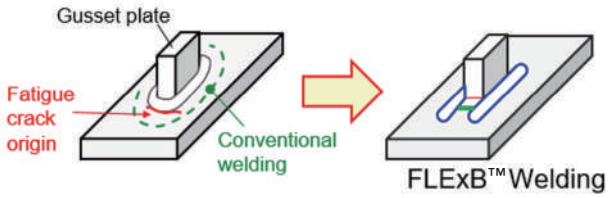
In this project, FLExB™ Welding was applied to gusset plates for lateral bracing*2, where improved fatigue strength is required in steel bridges. This eliminates post-welding surface-treatment processes that were conventionally required to improve fatigue strength and also contributes to lower construction costs.

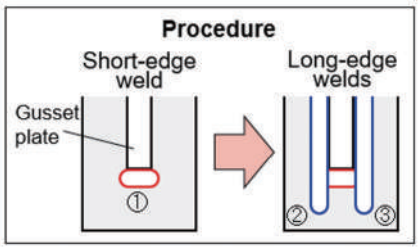
*1 Abbreviation for "fatigue life extended bead welding," a welding method designed to improve resistance to fatigue damage.

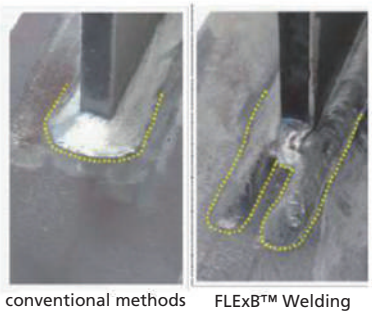
› **FLExB™ Welding Improves Fatigue Resistance of Steel Structures** (https://www.jfe-steel.co.jp/en/products/solution/plates/01-flexb.html)

› **Development of New "FLExB Welding" Method to Improve Fatigue Resistance of Steel Structures (Japanese only)** (https://www.jfe-steel.co.jp/release/2023/07/230724.html)

*2 A member arranged in a horizontal plane to connect main girders or main trusses and primarily resist lateral loads.







conventional methods FLExB™ Welding

ST Electrical Steel Sheets Contributing to Improved Resource-Use Efficiency

Electrical steel sheets* are popularly used as core materials for electrical equipment such as motors and transformers and therefore play a key role in determining their performance. JFE Steel contributes to global energy conservation and consequently to reducing CO_2 emissions by supplying high-performance electrical steel sheets.

*Electrical steel sheets are obtained by adding silicon to iron and are widely used as iron core materials in equipment such as motors and transformers.

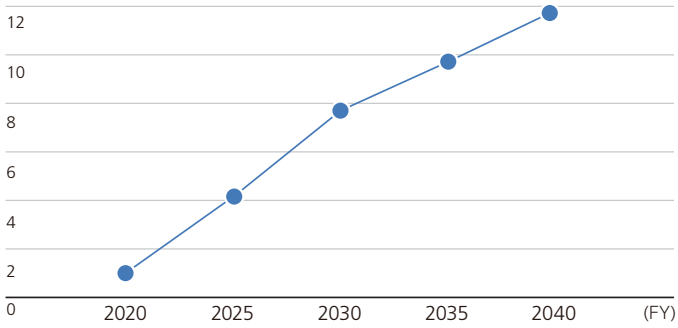
Expansion of Domestic Production Capacity for Non-Oriented Electrical Steel Sheets to Support an Electrified Society

Transitioning to a carbon-neutral society requires a major transformation of the social structure, from fossil-fuel-based energy to primarily carbon-free sources. Highly efficient motors, constructed from high-performance, non-oriented electrical steel sheets, will be essential for transitioning to a society in which mobility depends on electric vehicles (xEVs) and zero-emission electricity is the primary source of energy.

JFE Steel's high-grade non-oriented electrical steel sheets contribute to higher performance xEV drive motors through the improved efficiency of excellent low-iron-loss magnetic properties and reduced size made possible by high magnetic flux density. Recognizing the value of these characteristics has led many automobile manufacturers to incorporate these materials into their products, and demand for high-grade non-oriented electrical steel sheets is projected to expand going forward. To keep pace with this demand, Phase I expansion work to increase capacity for electrical steel sheet production at the West Japan Works (Kurashiki district) was completed as planned in July 2024, and line production began in September. The start-up of this facility has approximately doubled JFE Steel's production capacity for high-grade non-oriented electrical steel sheets (NO).

Demand for high-grade non-oriented electrical steel sheets essential for xEV drive motors is expected to increase further. Phase II expansion work is now underway. This plan is projected to triple production capacity for top-grade non-oriented electrical steel sheets for main xEV motors by FY2026 compared to pre-Phase I levels.

Demand for High-Grade Non-Oriented Electrical Steel Sheets (Calculated by JFE, 2020 results = 1.0)



Expansion of Grain-Oriented Electrical Steel Sheet Production Capacity in India to Improve Resource Efficiency by Supporting High-Efficiency Transformers

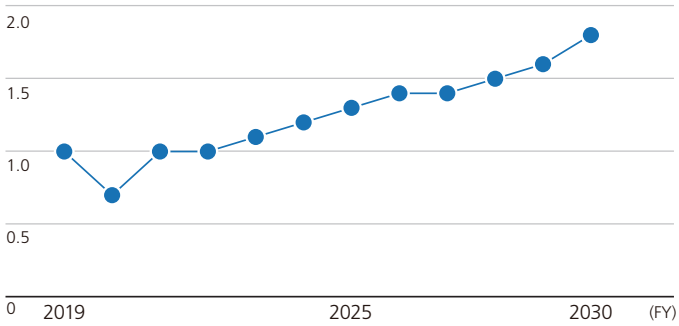
The global demand for grain-oriented electrical steel sheets in transformers is expected to increase due to continuously growing demand for electric power and the expanding adoption of renewable energy. The demand for these steel sheets, particularly in India, is expected to increase to 1.8 times the 2019 level in 2030.

JFE Steel and its strategic alliance partner in India, JSW Steel Limited (JSW), have therefore decided to substantially expand the production capacity of JSW JFE Electrical Steel Private Limited (J2ES Vijayanagar), established in 2023 as a 50:50 joint venture for the manufacture and sale of grain-oriented electrical steel sheets, and JSW JFE Electrical Steel Nashik Private Limited (formerly thyssenkrupp Electrical Steel India Private Limited; J2ES Nashik).

In this expansion plan, we will double the manufacturing capacity of the J2ES Vijayanagar site from the initial plan to 100,000 tonnes per year and increase the current manufacturing capacity of the J2ES Nashik site fivefold, from 50,000 tonnes per year to 250,000 tonnes per year. The manufacturing capacity of the J2ES Vijayanagar site and the J2ES Nashik site will be significantly increased to a total of 350,000 tonnes per year. In India, which has the largest population in the world, the

demand for GOES is rapidly increasing due to rising power demand linked to economic growth, expansion of renewable energy use, improvements in transformer efficiency, and an increase in the number of data centers. The market is expected to expand substantially. The J2ES Vijayanagar site is scheduled to start full production during FY2027, as planned. The expansion of the J2ES Nashik site will be carried out gradually starting in FY2028, with completion expected in FY2030. Through this manufacturing capacity expansion, we will secure a dominant position as the number one GOES supplier in India.

Demand for Grain-Oriented Electrical Steel Sheets in India
(Calculated by JFE, 2019 results = 1.0)



Resource-Efficient Si-Gradient Magnetic Material Contributing to Energy Savings in Electrical Equipment

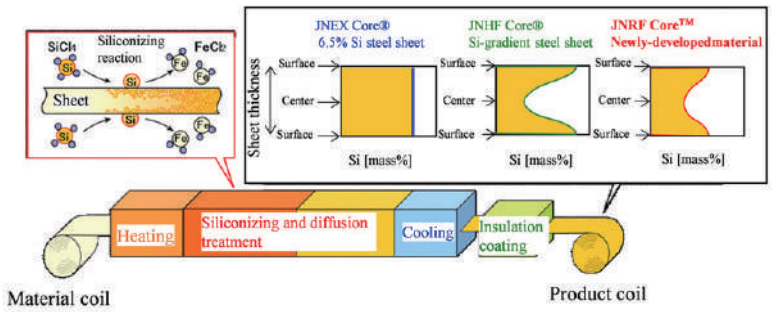
The recent trend toward increasing driving frequency due to the downsizing of electrical equipment has intensified the need to reduce iron loss* in the high-frequency range for electrical steel sheets, widely used as iron core material for electrical equipment such as motors and transformers. Meeting this demand depends upon increasing the concentration of silicon (Si), an element that strengthens electrical resistance. However, increasing concentration also causes magnetic flux density to decrease at the same time.

To overcome this, JFE Steel developed JNHF™, JNSF™, and JNRF™ using its proprietary chemical vapor deposition (CVD) continuous siliconizing process technology for controlling Si concentration distribution. These steel sheets offer low iron loss and high magnetic flux density in the high-frequency range, significantly contributing to higher efficiency and downsizing of electrical equipment. They are used as core materials for solar power reactors and high-speed motors.

In recognition of the positive social impact of this development, we received the 2022 Award for Science and Technology from the Minister of Education, Culture, Sports, Science and Technology under the development category of the science and technology field. JFE Steel will continue to contribute to improving electrical equipment by raising efficiency, reducing size, and saving energy by providing high-performance, high-grade electrical steel sheets.

*The loss of energy, primarily as heat, that occurs when the iron core is excited by an alternating current. The lower the iron loss, the higher the efficiency of electrical equipment.

CVD Continuous Siliconizing Process and Si Concentration Distribution Control



› Received the 2022 Award for Science and Technology from the Minister of Education, Culture, Sports, Science and Technology for the science and technology field (development category). (Japanese only)
(https://www.jfe-steel.co.jp/release/2022/04/220408.html)

SH Further Expanding the Global Supply Chain for the Electrical Steel Sheets Business

As global demand for electricity continues to grow, reducing power losses at each stage is essential for cutting CO_2 emissions. Motors used in power plants, factories, homes, and other settings account for 40% to 50% of global electricity consumption, while in Japan motors used in residential, commercial, and industrial applications account for approximately 55% of annual electricity consumption. It is estimated that improving motor efficiency in Japan by 1% would produce energy savings equivalent to the output of one large 1,000 MW-class power plant, making higher motor efficiency an important initiative for reducing CO_2 emissions.

JFE Shoji has established a global supply chain for electrical steel sheets used as core materials in motors and transformers. In addition to trading the materials, it has set up a system for adding value through processing tailored to customer needs. Most recently, it established a new motor-core processing base in Serbia to serve the energy-conscious European market, and the plant has begun operations. JFE Shoji's mission is to meet customer needs through its global supply chain, and it will continue contributing to reductions in CO_2 emissions by strengthening its supply network.



Exterior of the Electrical Steel Sheet Processing Plant in Serbia

ST Powder-Core Technology Contributing to Thinner, Lighter Motors with Complex Shapes and Improved Recyclability

In a joint project with JFE Techno-Research Corporation and ARMIS CORPORATION, a venture company launched by Shizuoka University, JFE Steel designed and prototyped a motor using Denjirou™, the company's insulated pure-iron powder, and demonstrated the feasibility of producing motors 48% thinner and 40% lighter than conventional models while maintaining the same output.

Demand continues to rise for smaller but higher-performing electric motors for industrial equipment and vehicles. Axial-gap motors, which are thinner than general radial-gap motors, can deliver high power (Figure 1). Unlike radial-gap motors, however, axial-gap motors pose a significant manufacturing challenge by requiring a three-dimensional magnetic core that cannot easily be made by laminating electrical steel sheets. In contrast, powder cores formed by pressing insulation-coated magnetic powder possess uniform three-dimensional magnetic properties, can accommodate complex shapes, and provide flexibility in design. Furthermore, because these cores are easily crushed, copper wire can be readily separated and recovered from motors, improving recyclability. Efforts are underway to remanufacture crushed powder cores by reforming them for reuse. JFE Steel has developed and launched the insulation-coated pure iron powder Denjirou™ for powder cores. In this project, an axial gap motor incorporating powder cores made with Denjirou™ was designed, prototyped, and evaluated for performance (Figure 2). The results showed a 48% reduction in height and a 40% reduction in weight, compared to conventional motors, at equal or greater efficiency (Table, Figure 3). Based on these results, JFE Steel and JFE Techno-Research Corporation have begun supporting customer design of components using powder cores while also supplying large powder compacts for machining and prototype powder cores processed into designed shapes to promote the use of powder cores for motors.

Going forward, JFE Steel will continue to develop products that meet customer needs while also encouraging technical exchanges, such as proposing the application of technologies and supporting prototype evaluation. These efforts will expand the supply of eco-products that contribute to a circular society and help realize a sustainable society.

Figure 1: Types of motors

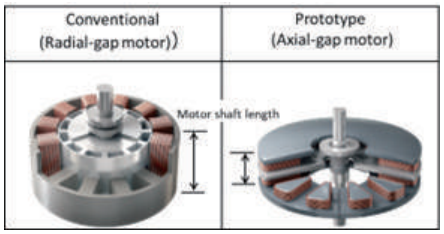
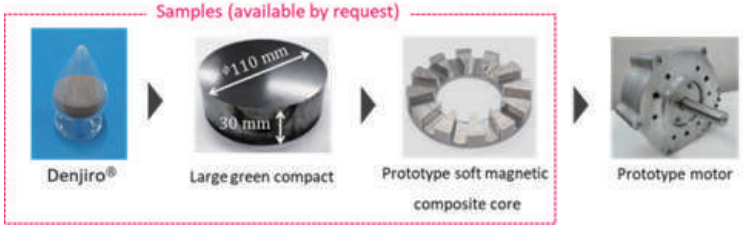


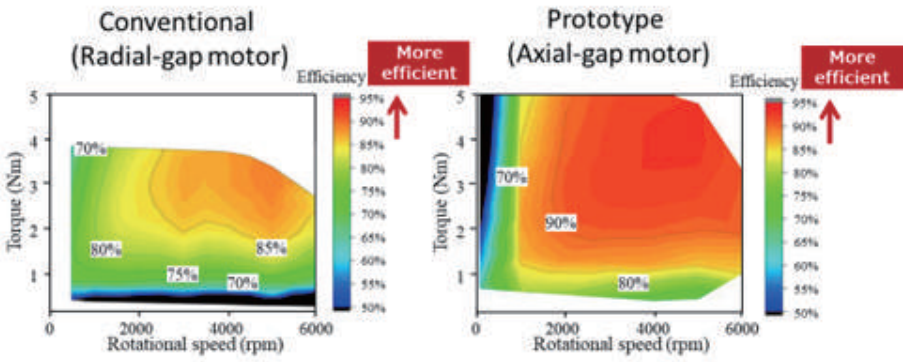
Figure 2: From powder to prototypes



Conventional vs. Prototype Motor (Test Results)

	Conventional (Radial-gap motor)		Prototype (Axial-gap motor)
Motor shaft length (mm)	90		110
Core weight (g)	1270	Thinner, Lighter	760
Core diameter (mm)	62		32
Max. efficiency (%)	89		93
Max. torque (Nm)	3.7		5.4

Figure 3: Efficiency of conventional vs. prototype motor



› **JFE Steel's New Insulated Pure-iron Powder for Soft Magnetic Composites Enables Prototype Axial-gap Motor to be Slimmed Down by 48%** (https://www.jfe-steel.co.jp/en/release/2024/01/240116.html)

ST High-Tensile-Strength Steel Sheets (HITEN) for Automobiles, Contributing to Improved Resource Efficiency through Vehicle Weight Reduction

Applying high-tensile-strength steel sheets (HITEN) to automobile components helps reduce weight while maintaining crash safety performance. JFE Steel contributes to improved fuel efficiency and ultimately reducing CO_2 emissions by supplying customers with ultra-high-tensile-strength steel sheets that meet the need for lighter car bodies. In addition to developing and producing these steel sheets for automobiles, JFE Steel develops application technologies. These include techniques for applying body design and forming or assembly technologies, which have been systematized to offer comprehensive solutions as JESOLVA™ (JFE Excellent SOLution for Vehicle Application), JFE Steel's unique suite of application technologies for automotive steel sheets. To provide these solutions, JFE Steel is actively promoting early vendor involvement (EVI) activities, in which it collaborates with customers from the early stages of automobile development. By improving car body performance and reducing weight, JFE Steel is contributing to the development of next-generation automobiles and the realization of a sustainable society.

Expansion of Ultra-High-Tensile-Strength Steel Sheet Supply Capacity Supporting Wider Adoption of Lightweight, High-Strength Vehicle Bodies (Construction of a Hot-Dip Galvanizing Line at West Japan Works (Fukuyama District))

The automotive industry is producing lighter and stronger car bodies to meet increasingly stringent environmental regulations and collision safety standards around the world, and demand is expected to grow for ultra-high-tensile sheets* with excellent processability. JFE Steel has therefore decided to construct a new hot-dip galvanizing line (CGL) at the West Japan Works (Fukuyama district), with an annual production capacity of 360,000 tonnes. The investment will total approximately 70 billion yen, with operations scheduled to commence in October 2028. The new line will enable JFE Steel to increase its production capacity for such sheets, including its JEFORMA™ series, to meet growing demand in the foreseeable future and respond to subsequent needs for even higher strength and functionality.

*High-tensile-strength steel sheets with a tensile strength of ≥980 MPa (megapascals)

Development of Application Technologies (Press Forming Methods for Ultra-High-Tensile-Strength Steel Sheets) Contributing to Lightweight, High-Strength Vehicle Bodies

While contributing to vehicle weight reduction, ultra-high tensile steel sheets are susceptible to press wrinkles, die damage, and shape variation, and all these issues are more likely to occur with thinner, stronger steel sheets, a factor that has inhibited the wider application of ultra-high tensile steel sheets.

Ultra-high-tensile-strength steel sheets exhibit greater springback after forming than ordinary steel sheets, and mass-produced materials also tend to show greater variation in strength. The Stress Reverse Forming™ Method is designed to reduce variation in the scale of springback (or variation in dimensional accuracies), which increases as ultra-high tensile steel sheets have higher levels of strength. This method uses the Bauschinger Effect, or the mechanical phenomenon in which deformation stress in steel sheets decreases immediately after the direction of the deformation is reversed. The Wall Bending and Restrike Method provides a solution for reducing springback by applying stress that counteracts the stress causing springback, particularly through the optimization of the shape formed in the preceding press-forming stage. These methods are expected to contribute to the stable production of press-formed parts even when material strength varies.

When ultra-high-tensile-strength steel sheets are press-formed into curved component shapes, it is necessary to address both press wrinkles that form in curved areas during forming and springback, in which the material tends to return toward its original shape after forming. The inflow control method reduces wrinkles, particularly those occurring in flange areas, by optimizing material inflow across multiple press-forming processes.

In addition to providing materials, JFE Steel actively promotes early vendor involvement (EVI) activities, in which it collaborates with customers from the early stages of automobile development to offer solutions that enable customers to develop products and improve product performance. The company has developed and systematized a range of application technologies as JESOLVA™ (JFE Excellent SOLution for Vehicle Application), which is JFE Steel's unique suite of application technologies for automotive steel sheets, to offer comprehensive solutions. Going forward, JFE Steel will continue to support the expanded application of ultra-high-tensile-strength steel sheets in automotive components, improve vehicle-body performance, and reduce weight, thereby contributing to the realization of a sustainable society.

Welding Technologies for HITEN Supporting Improved Resource Efficiency (Ultra-High-Tensile-Strength Steel Sheet Welding Stabilization Technologies: "Intelligent Spot Welding Technology" and "LME Crack Suppression Welding Technology"*1)

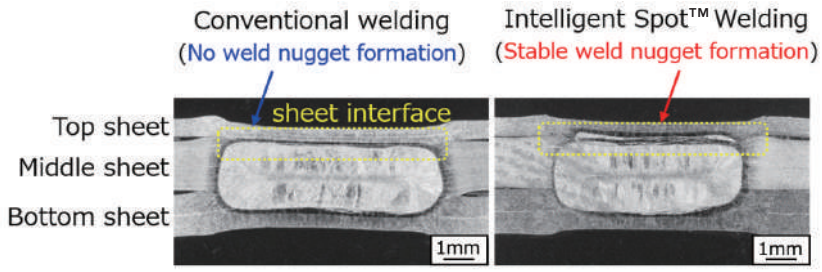
Spot welding technologies for automotive steel sheets developed by JFE Steel have now been adopted for components supplied to a Japanese automaker. JFE Steel provides a wide range of materials and application technologies to meet the increasingly advanced requirements of next-generation vehicle-body design.

Spot welding requires stable weld quality despite increasingly complex combinations of steel sheets, and customers have sought technologies that enable the use of more challenging sheet combinations and the wider use of HITEN. Through collaboration with customers, the following technologies have been adopted for vehicles for the Japanese market and production has begun. Intelligent Spot Welding Technology forms stable weld nuggets in stacks of three or more sheets with a large sheet-thickness ratio.*2 Conventionally, heat generation tended to concentrate on the thick-sheet side, making it difficult to form a sufficient weld between the thick and thin sheets. Two-stage control of the current pattern and electrode force stabilizes weld quality.

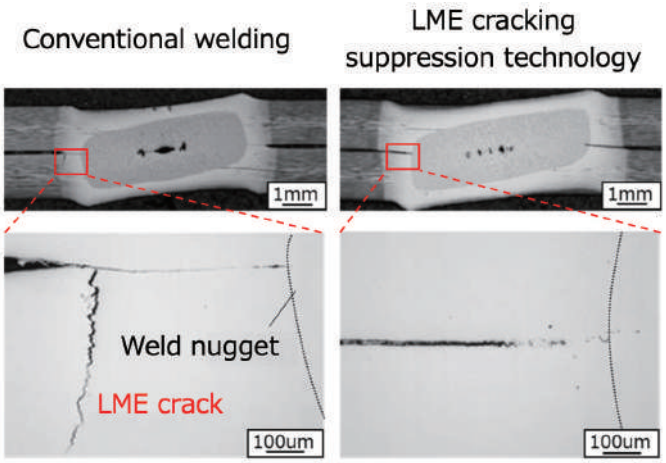
LME Crack Suppression Welding Technology suppresses LME cracking that can occur when welding high-strength coated steel sheets. JFE Steel developed a welding process that promotes cooling and solidification of the coating, thereby improving the stability of weld quality in ultra-high-tensile-strength steel sheets. Alongside the application of this technology, JFE Steel's ultra-high-tensile-strength steel sheets have begun to be adopted in domestically produced vehicle models. Application technologies, including Intelligent Spot Welding Technology and LME Crack Suppression Welding Technology, have been organized under the JESOLVA™ brand to provide comprehensive solutions.

*1 Abbreviation for "liquid metal embrittlement."
*2 Total sheet thickness divided by the thickness of the thinnest sheet. A larger value makes welding of the thin sheet less stable.

Intelligent Spot™ Welding



LME cracking suppression technology



Highly Formable HITEN "JEFORMA™" Contributing to Improved Resource Efficiency and Reduced CO_2 Emissions

JFE Steel has developed a 980 MPa-class highly formable galvannealed (GA) high-tensile-strength steel sheet with unprecedented formability and collision-energy absorption characteristics, contributing to vehicle weight reduction and improved crash safety.

In the automotive industry, demand for GA high-tensile-strength steel sheets is increasing to reduce vehicle weight for improved energy efficiency and lower CO_2 emissions during driving, while improving corrosion resistance to extend vehicle service life. However, as strength increases, these steel sheets tend to lose formability and to fracture in collisions, creating a need for improved press formability and sufficient collision-energy absorption.

To address these issues, JFE Steel developed a surface-control technology that utilizes silicon (Si), which is effective in improving steel-sheet ductility, by controlling the atmosphere inside the CGL furnace to retain Si as oxides within the steel sheet. In addition, JFE Steel achieved both high formability and excellent collision-energy absorption performance by applying proprietary heating and cooling heat-pattern control in the CGL annealing process.

The newly developed steel uses resources more efficiently by reducing vehicle weight and lowers CO_2 emissions by decreasing energy consumption during driving. Its excellent corrosion resistance also extends vehicle service life, reducing environmental impact across the entire life cycle. Expanded application is also expected in energy-absorbing components and components around batteries for electrified vehicles.

JFE Steel is expanding the JEFORMA™ series of highly formable high-tensile-strength steel sheets incorporating this technology while developing and proposing application technologies tailored to customer needs. Through these initiatives, we will realize lighter, higher-performance, safer, and longer-lasting automobiles and at the same time support the development of a circular society and the achievement of a carbon-neutral society.

This technology received the 72nd Okochi Memorial Technology Prize (FY2025) in recognition of its originality and contribution to industry.

> **Received the 72nd Okochi Memorial Technology Prize—Development of Highly Formable, High-Strength Galvannealed Steel Sheet Contributing to Automobile Weight Reduction— (Japanese only)** (https://www.jfe-steel.co.jp/release/2026/02/260218.html)

Cold-Press Forming Technology for Integrated Auto-Frame Component to Improve Resource Efficiency

As a component integration solution using ultra-high-tensile-strength steel sheets and cold-press forming, JFE Steel has developed a technology for reducing the number of components in automobile body structures, targeting the rear member*1.

Automakers have recently focused on, from the standpoint of improving productivity and reducing manufacturing costs, large-scale component integration technologies such as giga casting, which uses aluminum casting technology, and medium-scale integration technologies such as hot stamping, which involves heating steel prior to press forming and simultaneously cooling and quenching in the die to achieve both formability and component strength. This technology falls into the same category of component integration technologies.

Component integration by cold-pressing presents challenges in formability. However, by utilizing JESOLVA™, JFE Steel's unique systematized solution technology for automotive steel sheets, we have made it possible to form large components using ultra-high-tensile-strength steel sheets in grades up to 1,470 MPa. Furthermore, to integrate components with different strengths, we applied Tailor Welded Blank (TWB)*2 and our proprietary Cold Patchwork Method*3, enabling designs with strength variations within a single component. The result is a reduced number of components, even for small-scale integrations, thereby increasing productivity and reducing the cost of auto-frame production.

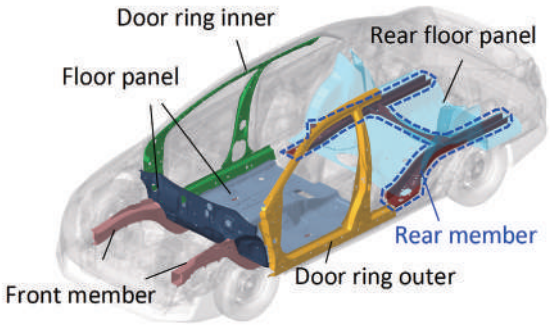
Challenges arise as integrated components become larger, such as higher logistics costs and greater burdens on end users when damage requires extensive repairs. Limiting integration to appropriate ranges using this technology ensures portability and reduces repair burdens.

The rear member is a large part that protects the body from rear collisions and is composed of 11 spot-welded components. With this technology, the number of components can be reduced to as few as three while maintaining rear collision performance, thereby improving productivity and reducing costs in automobile body manufacturing.

As part of these initiatives, JFE Steel exhibited for the first time at Automotive Engineering Exposition 2026 YOKOHAMA and Automotive Engineering Exposition 2026 NAGOYA. These comprehensive exhibitions feature cutting-edge mobility technologies, and JFE Steel primarily showcased products and technologies related to vehicle-body manufacturing.

*1 A structural component that supports a vehicle's rear suspension and drivetrain and connects them to the body
*2 A processing technology that uses laser welding to join steel sheets of different thicknesses and strengths into a single sheet
*3 A technology for stacking and spot-welding together steel sheets for simultaneous press forming

Cold-press integration target and rear member



Prototype rear member



ST Certification under the SuMPO Environmental Label Program SuMPO EPD

JFE Steel acquired SuMPO EPD certification for 36 product types under the SuMPO Environmental Label Program operated by the Sustainable Management Promotion Organization (SuMPO). These certifications cover three types of steel sheets for cans, nine flat steel products, nine construction steel products, three types of steel plates, four steel pipe products, and eight bar and wire rod products.

Environmental Product Declarations (EPDs) quantify environmental information for each product using the LCA (life cycle assessment) methodology under ISO 14044, and only product information that has passed third-party verification in accordance with ISO 14025 is disclosed as valid information on the EPD program website.

SuMPO EPD is an environmental label for quantitatively disclosing the environmental impact of products and services throughout their life cycle, from raw material procurement to disposal and recycling in accordance with ISO 14025:2006 (environmental labels and declarations, Type III Environmental Declarations, Principles and Procedures). The environmental impact of our products is presented as data to increase transparency. The disclosure of environmental impact data with fairness and reliability assured by third-party review and verification enables customers to quantitatively and objectively evaluate the environmental impact of the products they use.

Going forward, JFE Steel will actively promote the acquisition and publication of SuMPO EPD for its products.

› **SuMPO Environmental Labeling Program** (https://ecoleaf-label.jp/en/)

Expansion of the Use and Sales of Recycled Resources

The JFE Group is actively promoting the use of recycled resources to help realize a circular economy and is expanding its market application through products and services that leverage these materials. By combining resource efficiency with waste reduction, we contribute to reducing environmental impact and achieving sustainable growth.

SH Initiatives to Strengthen the Handling of Environmentally Beneficial Products

Our trading business has strengthened the handling of environmentally beneficial products by setting KPIs for the handling volume of fuels for biomass power plants and steel scrap. In FY2025, as part of expanding our lineup of environmentally beneficial products, we began handling aluminum and recycled zinc. We will continue advancing efforts toward realizing a circular economy.

Expanding Business in Biomass Fuels

JFE Shoji imports palm kernel shells (PKS) from Malaysia and Indonesia. We also source wood pellets from Southeast Asian countries to supply biomass fuel to power plants in Japan.

PKS and wood pellets are made from materials such as byproducts and wood residues generated during palm oil production and wood processing. Using these as fuel reduces waste and promotes effective resource use. These initiatives also contribute to realizing a circular economy. Using these as fuel reduces waste and promotes effective resource use. These initiatives also contribute to realizing a circular economy.

Since these biomass fuels absorb CO_2 during their growth process, they are regarded as carbon-neutral fuels, offsetting the CO_2 emitted when burned. Furthermore, replanting and recultivating the trees and crops used as raw materials after harvesting supports the development of a sustainable supply chain.

To promote carbon neutrality in power-generation fuels, JFE Shoji is also developing and supplying alternative biomass fuels toward reducing environmental impact and advancing the energy transition.



PKS



Wood pellets

Expansion of Scrap Trading to Support the Development of a Recycling-Oriented Society

JFE Shoji engages in a recycling business for steel and aluminum scrap. Demand for steel scrap is particularly expected to grow in Japan and overseas as the global community advances toward carbon neutrality. JFE Shoji will contribute to building a recycling-oriented society by increasing scrap recycling across the globe.

ST Initiatives to Expand Scrap Collection and Use

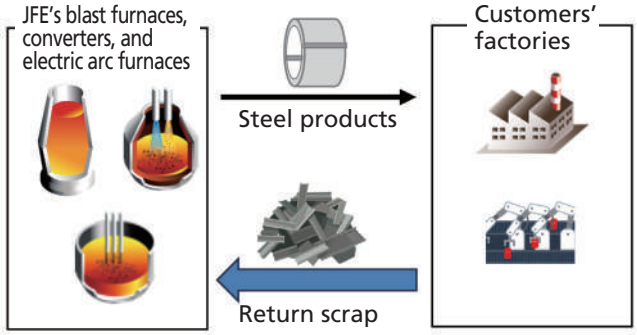
Steel is highly recyclable because it can be separated and collected using magnetic force. Its recycling rate of 93.7% is extremely high compared to other materials. In addition, many of the additive elements (alloys) contained in recovered steel scrap can be separated and removed during refining through gasification or oxidation, meaning that recycling is less likely to result in a decline in quality. This characteristic allows for closed-loop recycling, in which steel can be reborn repeatedly as high-quality, high-functionality products. This helps reduce consumption of newly extracted natural resources, emissions of environmentally harmful substances, and waste, thereby significantly contributing to reducing environmental impact across the entire life cycle.

Closed-Loop Recycling Concept



Source: The Japan Iron and Steel Federation

JFE Steel uses steel scrap as raw material in blast furnaces, converters, and electric arc furnaces. We have traditionally collected and used "return scrap," a term for scrap generated during production that is sold back by customers and Group factories. Under the Eighth Medium-term Business Plan, we have set a KPI for the expansion of this volume with associated action plans. For FY2026, we expect to achieve our target of increasing the volume of collected and used return scrap to 2.5 times the average during the Seventh Medium-term Business Plan period. By expanding the collection and use of scrap toward the realization of a circular society, we will also contribute to addressing climate change.



Resource Recovery and Recycling Targets and Results

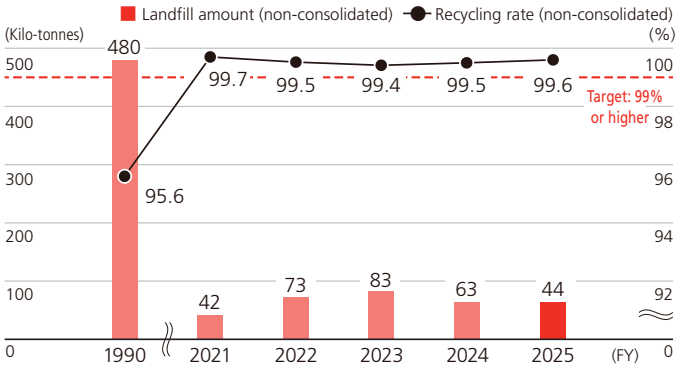
Recognizing that the efficient use of resources is a key environmental issue for the manufacturing industry, the JFE Group sets and manages progress against ambitious targets tailored to the respective business characteristics of Group companies. We will continue to pursue the following targets and advance initiatives that contribute to the transition to a circular economy.

The responsible use of water resources is also an important environmental concern for the manufacturing industry. Since the steel business consumes large volumes of water, we set ambitious targets for water recycling rates, manage progress, and strive to reduce water usage.

Targets and Results for FY2025 and Targets for FY2026

Operating Company	FY2025 Targets	FY2025 Results and Initiatives	FY2026 Targets
JFE Steel	Recycling rate of co-products: 99% or higher	Resource recovery rate: 99.6%	Continue efforts to prevent and reduce the generation of dust and sludge and recycle co-products, to maintain the recycling rate of co-products at 99% or higher
	Maintain efficient use of water Recirculated water usage rate: 90% or higher	Recirculated usage rate: 92.2%	Continue the water resource recycling effort to reduce water usage and maintain the recirculated usage rate at 90% or higher
JFE Engineering	Recycling rate at construction sites • Recycling rate of rubble: 99.5% or higher • Recycling rate of sludge: 95.0% or higher • Recycling rate of industrial waste: 85.0% or higher	Recycling rate at construction sites • Recycling rate of rubble: 97.7% • Recycling rate of sludge: 99.4% • Recycling rate of industrial waste: 66.8%	Recycling rate at construction sites • Recycling rate of rubble: 99.5% or higher • Recycling rate of sludge: 95.0% or higher • Recycling rate of industrial waste: 85.0% or higher
	Recycling rate of office recyclable waste (Yokohama head office): 98.0% or higher	Recycling rate of office recyclable waste (Yokohama head office): 98.9%	Recycling rate of office recyclable waste (Yokohama head office): 98.0% or higher
JFE Shoji	Global recycling of steel scrap • Scrap trade volume exceeds FY2020 level by 10%	From FY2020: –3% Overseas sales increased, but domestic sales decreased partly due to lower crude steel production, and the target was not achieved	Global recycling of steel scrap: +10% from FY2020 Strengthen domestic and overseas procurement networks and expand sales to JFE Group and domestic and overseas customers

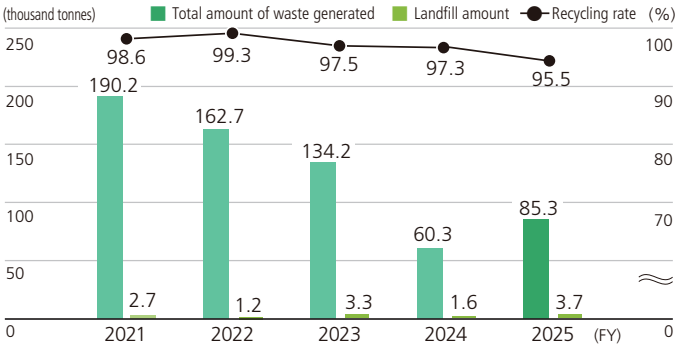
JFE Steel Landfill of Co-Products and Recycling Rates



		1990	2021	2022	2023	2024	2025	
Group companies*	Amount released	—	504	593	583	640	620	(Kilo-tonnes)
	Landfill amount	—	52	94	97	83	50	(Kilo-tonnes)

*Twenty-two JFE Steel consolidated subsidiaries in Japan

JFE Engineering Waste Generated at Construction Sites



For more quantitative data on industrial waste generated at the manufacturing plants, please refer to:

› **Environmental Data** (P. 273)

Efficient Use of Water Resources

The JFE Group recognizes water resources as important natural capital that supports its business activities. At the same time, issues surrounding water resources are becoming increasingly serious around the world due to such factors as advancing climate change, population growth, and expanding industrial activity, and companies are expected to use water resources sustainably.

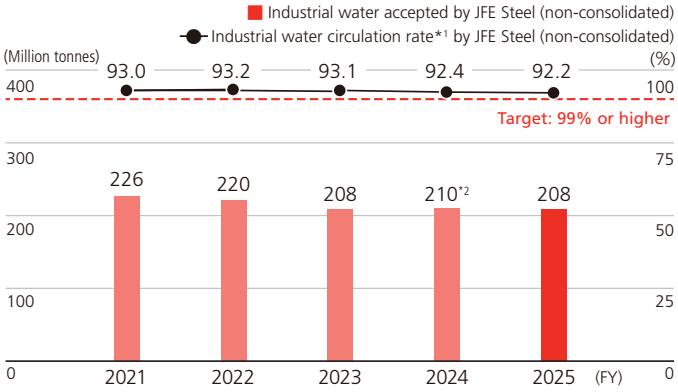
The JFE Group works to use water resources efficiently and conserve local water environments by reducing water intake in its business activities, promoting water recirculation, and appropriately managing water quality. We will also contribute to realizing a sustainable society while appropriately managing water-related risks and opportunities, taking into account their relationship with the transition to a circular economy and our efforts for conserving biodiversity and nature positivity.

Furthermore, we will continue to promote water-resource management tailored to the characteristics of each business, use water more efficiently, and reduce environmental impact, working toward the sustainable use of water resources.

ST Setting Targets for Water Recirculation and Implementing Them in the Steel Business

All of JFE Steel's seven production sites in Japan have developed water management plans and monitored water usage in seeking to increase the recirculation rate of water in order to reduce the volume of water intake and drainage and efficiently use water resources. The target water recycling rate at JFE Steel, which uses a large volume of water for cooling and other processes, is 90% or more, which is extremely high considering the amount evaporated when water is used. We are striving to improve the recycling rate by adopting purification processes such as biological and chemical wastewater treatments, and we have been successfully achieving the target. Our recycling rate of industrial water in FY2025 maintained a high level of 92.2%.

JFE Steel Industrial Water Accepted and Circulated



JFE Steel

Total amount	3,207	3,242	3,053	2,748*2	2,672	(Million tonnes)
Industrial water accepted	226	220	208	210	208	(Million tonnes)

Group companies*3

Total amount	235	233	207	226	218	(Million tonnes)
Industrial water accepted	19	18	16	16	17	(Million tonnes)

*1 Industrial water circulation rate (%) = (Total amount used – industrial water accepted) / total amount used × 100
*2 Figures have been revised retroactively
*3 Scope: Twenty-two JFE Steel consolidated subsidiaries in Japan

EN Efficient Use of Water Resources in the Engineering Business

JFE Engineering and each Group company strive to use water efficiently at their business sites.

For more on quantitative data related to water, please refer to:
› Environmental Data (P. 273)

Biodiversity Conservation and Nature Positive

Basic Policy

Recognizing that natural capital and biodiversity are foundational for realizing a sustainable society, the JFE Group conducts business as a member of the international community in harmony with nature. We particularly recognize biodiversity conservation as a key challenge and assess the ecological impacts associated with our business activities while working to minimize those impacts. We are also engaged in activities that contribute to biodiversity conservation and nature positive at our own production sites, construction sites, and their surrounding areas, and at suppliers, including monitoring ecosystems and carrying out conservation activities at steelworks, our key facilities, and in their surrounding areas. We are actively contributing beyond our business operations through initiatives that include the development of steel slag products that restore marine environments, joint research with local governments, and the provision of environmental education opportunities for local communities. Taking into account the interrelationships among environmental issues, such as biodiversity conservation, climate change mitigation, and resource circulation, we are pursuing initiatives such as obtaining J Blue Credit™ certification for marine environment restoration using steel slag products and reducing CO_2 emissions during resource extraction by using recycled materials.

Our core steelmaking business uses large quantities of fresh water for cooling and cleansing products and facilities. For this reason, the efficient use of water resources with due consideration to the source of the water and stakeholders in the area is a key challenge. While we have always implemented countermeasures against meteorological disasters such as droughts and floods at our manufacturing sites in Japan, we are further reinforcing them in anticipation of the increased frequency and severity of weather events associated with climate change by securing alternative means and raising the height of embankments. We also seek to identify water-related risks throughout our business sites and supply chain in Japan and overseas, such as the risk of drought at the source of water intake and pollution at the point of discharge. In areas under water stress, we will respond appropriately through dialogue with stakeholders.

Basic Approach

The JFE Group has established a basic policy to promote initiatives for biodiversity conservation and nature positive.

Guided by our corporate philosophy of contributing to society with the world's most innovative technology, the JFE Group recognizes biodiversity conservation and nature positive as essential for realizing a sustainable society and has established the following policies to guide its activities:

- Deepen recognition that our business activities depend on and impact biodiversity and natural capital and promote activities to mitigate risks.
- Promote the development of processes, products, and technologies that contribute to biodiversity conservation and nature positive.
- Collaborate with stakeholders such as local communities and supply chains and promote biodiversity conservation and nature positive efforts through diverse approaches, including integration with carbon neutrality and the circular economy.
- Foster awareness of biodiversity through employees' proactive initiatives and educational activities.
- Disclose initiatives for biodiversity conservation and nature positive and broadly share them with society

Endorsing and Participating in External Initiatives

As a member of the Keidanren Committee on Nature Conservation, the JFE Group endorses the Declaration of Biodiversity by Keidanren and Action Policy and actively engages in the conservation of nature and biodiversity.

The JFE Group is registered on the Ministry of the Environment's Nature Positive Economy Promotion Platform (NPE Platform) as an NPE Partner.

JFE Holdings has also joined the 30by30 Alliance for Biodiversity, launched by the Ministry of the Environment, business associations, nature conservation groups, and other organizations. This alliance is committed to effectively protecting at least 30% of Japan's land and sea as healthy ecosystems toward the nature positive goal of halting and reversing biodiversity loss by 2030. JFE will contribute to the conservation of biodiversity by carrying out various activities, including the conservation of its biotopes.

For further details on external initiatives, please refer to:

- **Declaration of Biodiversity by Keidanren and Action Policy (Revised Edition)** (https://www.keidanren.or.jp/en/policy/2018/084.html)
- **Nature Positive Economy Promotion Platform, Ministry of the Environment (Japanese only)** (https://policies.env.go.jp/nature/biodiversity/npeplatform/index.html)
- **Ministry of the Environment's 30by30 Alliance** (https://www.env.go.jp/nature/biodiversity/OECM.html)

In addition, JFE Holdings has endorsed the disclosure recommendations published by the Taskforce on Nature-related Financial Disclosures (TNFD), joined the TNFD Forum, and registered as a TNFD Adopter. Going forward, we will appropriately disclose information about the impacts of our business activities on the natural environment and biodiversity in line with the TNFD framework.

- **Taskforce on Nature-related Financial Disclosures (TNFD)** (https://tnfd.global/)

JFE Group Strategy for Biodiversity Conservation and Nature Positive

Evaluation of the Relationship between Business Activities and Natural Capital (Evaluation in Line with the LEAP Approach)

As a holding company, JFE Holdings is responsible for the JFE Group's comprehensive risk management under the Basic Policy for Building Internal Control Systems. Regarding initiatives for biodiversity conservation and nature positive, each operating company identifies priority areas, assesses dependencies and impacts, and evaluates risks and opportunities in line with the LEAP approach recommended by the TNFD, and the results, including priorities for action, are reflected in the Group's strategy.

The Group is conducting evaluations for future disclosures in line with the LEAP approach and organizing its initiatives and analysis results. In FY2023, we conducted a trial evaluation focusing on the steel business. In FY2024, we expanded the scope within the steel business for a more detailed examination and also evaluated the engineering business.

Process

Locate

Locating the interface with nature

Steel business: identified the location information of major manufacturing sites and mines supplying raw materials such as iron ore and coking coal and assessed the state of natural capital in the surrounding areas.
Engineering business: identified the location information of major construction sites in FY2025 and assessed the state of natural capital in the surrounding areas.
Both evaluations referred to TNFD-recommended tools such as IBAT and Resource Watch.

Evaluate

Evaluating dependencies and impacts

We applied ENCORE and other TNFD-recommended tools to identify and evaluate the dependencies and impacts of our steel and engineering businesses on important natural capital.

Assess

Assessing nature-related risks and opportunities

Based on the findings from the evaluation of the dependencies and impacts, we identified and assessed nature-related risks and opportunities for our steel and engineering businesses.

Prepare

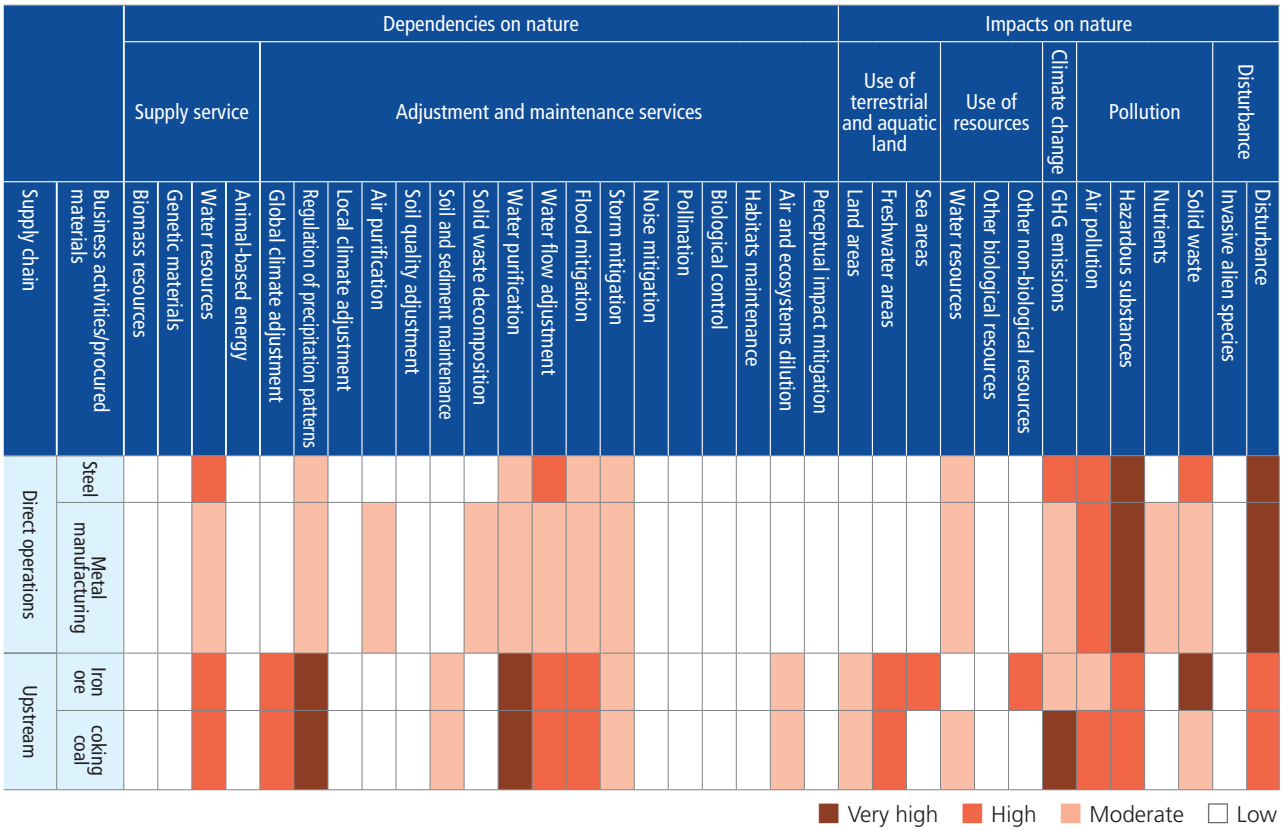
Preparing to respond and report

We have been preparing to respond to the assessed risks and opportunities.

Steel Business

Specific Categories of Findings on the Dependencies and Impacts on Nature (Evaluate)

Regarding the dependencies and impacts of our steel business on nature, we reviewed the findings under the categories of manufacturing at our production sites and procurement from our upstream supply chain at iron ore and coking coal mining sites. Our procurement and manufacturing operations depend on natural resources, particularly related to water supply, the control of water volume, and climate adjustments. Meanwhile, our manufacturing operations impact nature through GHG emissions and pollution. The iron ore and coking coal mining conducted upstream in our supply chain also affect nature through land use, water resource use, GHG emissions, and pollution.



Assessment of Leading Manufacturing Sites (Locate)

Our assessment of major manufacturing sites, in line with the five criteria* defined by the TNFD for priority areas, found that there are areas of high conservation significance, including key biodiversity areas (KBAs), in the surrounding regions. We also conducted similar assessments for production sites of JFE Steel's domestic Group companies, evaluated the surrounding natural environment, and confirmed the results.

Manufacturing Site	Conservation Significance		Ecosystem Integrity	Degradation in Ecosystem Integrity	Water-Related Physical Risks		
	Protected Areas/KBA	STARs	Biodiversity Intactness Index	Pressures on Biodiversity	Baseline Water Stress	Riverine Flood Risk	Coastal Flood Risk
East Japan Works, Chiba	Located in proximity	1	1	5	3	2	3
East Japan Works, Keihin	Not located in proximity	1	1	5	3	2	3
West Japan Works, Kurashiki	Located in proximity	1	1	5	2	2	3
West Japan Works, Fukuyama	Located in proximity	1	2	5	2	2	3
Chita Works	Located in proximity	1	1	5	3	2	3
Sendai Works	Located in proximity	1	1	5	2	2	3

Very high ■ High ■ Moderate □ Low

In addition, the JFE Shoji Group conducted similar assessments at 48 processing sites operated by 38 companies (24 sites at 18 companies in Japan and 24 sites at 20 companies overseas). In Japan, six sites were found to be adjacent to protected areas or KBAs of high conservation significance. Overseas, sites in eight countries were found to face water risks, and in one country, a site was identified as being adjacent to indigenous peoples or local communities. These sites have been recognized as priorities for future evaluation and responses.

*Assessment based on the five criteria was performed using the following indicators and tools.

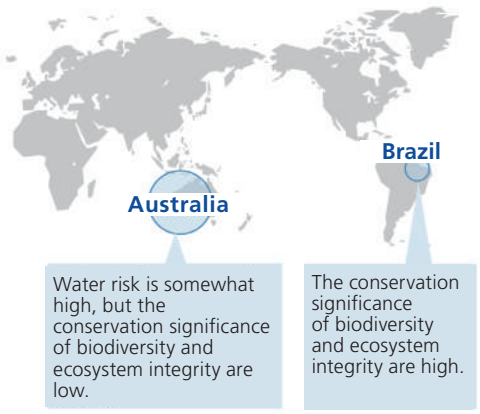
- Conservation significance: Assessed with IBAT, the proximity (within a 5-km radius) to areas of conservation significance, for example, protected areas and KBAs
- Ecosystem integrity: Assessed based on the Biodiversity Intactness Index provided by Natural History Museum
- Rapid degradation in ecosystem integrity: Assessed based on the Pressures on Biodiversity indicator provided by WWF Biodiversity Risk Filter to measure the degree of influence on nature
- Water-related physical risks: Assessed based on the Baseline Water Stress, Riverine Flood Risk, and Coastal Flood Risk indicators through the use of Aqueduct

Assessment of Raw Material Suppliers (Locate)

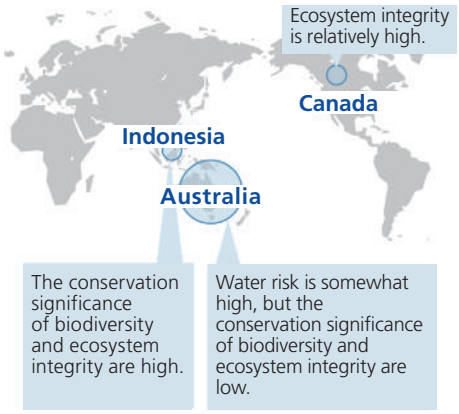
We located the interfaces of our major iron ore and coking coal suppliers in natural settings and assessed the state of nature at those sites (procurement volume of roughly 70%; 8 iron ore mines and 14 coking coal mines). Iron ore is procured from countries including Australia and Brazil. The assessment revealed that procurement mines in Australia are exposed to high water stress, making responses to water-related risks important. Although procurement volumes are relatively small, some mines in Brazil were found to be located near areas of conservation significance.

Our coking coal suppliers are mining in Australia, Canada, and Indonesia. The assessment revealed that procurement mines in Australia face relatively low levels of various risks. On the other hand, some mines in Canada and Indonesia were found to be located in regions with high ecosystem integrity.

Iron Ore (Supplier Countries and Procurement Ratios)



Coking Coal (Supplier Countries and Procurement Ratios)



Reviewing Nature-Related Risks and Opportunities (Assess and Prepare)

Following the above evaluation of dependencies and impacts, we organized the currently assumed nature-related risks and opportunities. The risks, some of which are recognized in our climate change scenario analysis, include physical risks that could materialize due to a water shortage or natural disasters and potentially trigger a decrease in production at our manufacturing sites or a lack of procurement from suppliers. Additionally, transition risks may arise if regulations concerning protected areas and pollution are tightened. On the other hand, opportunities were identified in the form of increased demand and development potential for environmentally friendly products, processes, and technologies, as well as environmental materials that contribute to resource circulation.

Meanwhile, we confirmed that JFE Steel's major iron ore and coking coal suppliers have conducted assessments concerning water resources and ecosystems and have publicly disclosed how to respond to their detected risks. We will continue to monitor the status of their response efforts as part of our supply chain management. We will also encourage more of our suppliers to adopt and observe the JFE Steel Procurement Guidelines.

As for our own material risks and opportunities, we will maintain the current measures in place and, while enhancing our assessment, we will keep a close watch on whether additional measures are necessary.

Nature-Related Risks and Opportunities in Direct Operations

	Category		Item	Impact	Magnitude	Likelihood	Time Frame	Response
Direct operations	Physical risk	Acute	Intensification of extreme weather	Suspension of operations due to infrastructure damage caused by the increased frequency and severity of natural disasters	Large	Low	Medium term	**Reinforcement of drainage facilities at steelworks and plants** •Facilities reinforced to prevent water pollution during heavy rainfall (expansion of treatment, water gates, raised manholes, etc.) •Facilities reinforced to prevent site flooding (forced drainage systems, pump trucks, raised critical equipment, etc.) •Damage mitigation through the use of weather information for torrential rains, typhoons, storm surges, etc. (minimizing damage by preemptively shutting down equipment when risks are anticipated)
		Chronic	Water shortages and ecosystem degradation	Suspension of operations due to ecosystem degradation, such as water depletion	Large	Low	Long term	**Reduced water intake and discharge by recycling water** •Formulate water management plans and monitor and manage water usage (set targets for water usage and recycling rate and track actuals monthly) •Reduce water intake and discharge by increasing recycling rates (install coagulation-sedimentation, filtration, and biological treatment to promote recycling) •Conduct water stress assessments (using Aqueduct for objective evaluation)
			Impact on surrounding ecosystems	Impacts on ecosystems through bioaccumulation and other processes when chemical substances flow into rivers, seas, and other water bodies	Medium	Low	Long term	**Wastewater treatment under strict voluntary management standards** •Implement thorough purification to reduce environmental impacts when discharging water used in the steelmaking process into public water bodies •Conclude agreements with local governments that enact stricter discharge standards than those mandated by the Water Pollution Prevention Act, and implement water quality improvement initiatives with stricter voluntary management standards to consistently meet those agreements •Conduct environmental audits (annually by the audit department, covering measurement results, responses to incidents, and the handling of complaints)

	Category		Item	Impact	Magnitude	Likelihood	Time Frame	Response
Direct operations	Transition risk	Policies and regulations	Stricter regulations toward nature positive	Increased compliance costs from tighter regulations on water use and pollution affecting ecosystems around business sites (terrestrial and aquatic)	Medium	Low	Long term	**Implementation of the following measures with the goal of Zero Major Environmental and Disaster Accidents** •Implement thorough purification to reduce environmental impacts when discharging water used in the steelmaking process into public water bodies •Conclude agreements with local governments that enact stricter discharge standards than those mandated by the Water Pollution Prevention Act, and implement water quality improvement initiatives with stricter voluntary management standards to consistently meet those agreements •Conduct environmental audits (annually by the audit department, covering measurement results, responses to incidents, and the handling of complaints) •Install NOx and SOx control equipment (e.g., low-NOx burners, exhaust gas treatment facilities) •Use dust dispersion simulations to design effective countermeasures for neighboring areas (identify sources, strategic placement of windbreak walls and nets) •Continuously monitor major emission sources of soot, dust, NOx, and SOx, and detect and remedy abnormal signs at an early stage •Periodically conduct on-site environmental audits of domestic and overseas Group companies (every 3–5 years, depending on environmental impacts and management practices) •Periodically exchange information with local residents (explain environmental measures at steelworks and regularly gather resident feedback)
		Reputation	Occurrence of accidents affecting surrounding ecosystems	Financial penalties from litigation or damage claims, increased response costs, and reduced sales due to loss of trust resulting from adverse impacts on ecosystems around business sites (terrestrial and aquatic) through water use, pollution, and other causes.	Medium	Low	Long term	
	Opportunity	Services and markets	Ecosystem restoration and environmental load reduction through steel and slag products	Increased demand for products contributing to nature positivity and reducing environmental load	Medium	High	Short term	**Expansion of supply of products that contribute to biodiversity, nature positivity, and environmental load reduction, and collaboration with municipalities and other companies** •Expand supply of eco-products such as high-tensile steel sheets and electrical steel sheets •Manufacture steel sheets free of environmentally harmful substances such as hexavalent chromium •Contribute to marine environment improvement, shallow-water habitat and tidal flat creation, and coral reef restoration through steel slag products •Joint public-private research project with Yokohama City for "Creating Abundant Seas" •Agreement with Chiba Prefecture on a demonstration project for blue carbon creation at the Hota Fishing Port •Obtained Nature Symbiosis Site certification for a seaweed bed created off Shinto, Iwakuni City, Yamaguchi Prefecture, in collaboration with Koujiro Fisheries Cooperative, the National Institute of Technology, Ube College, and Iwakuni City •Promote biodiversity verification of steel slag products through collaboration with the venture company Innoqua Inc.
		Products and services	Growing demand for resource-circulating products	Higher sales by expanding lineup of resource-circulating products	Medium	High	Medium term	**Expand lineup of environmental products supporting resource circulation** •Expand targeted products at JFE Shoji and strengthen distribution and logistics

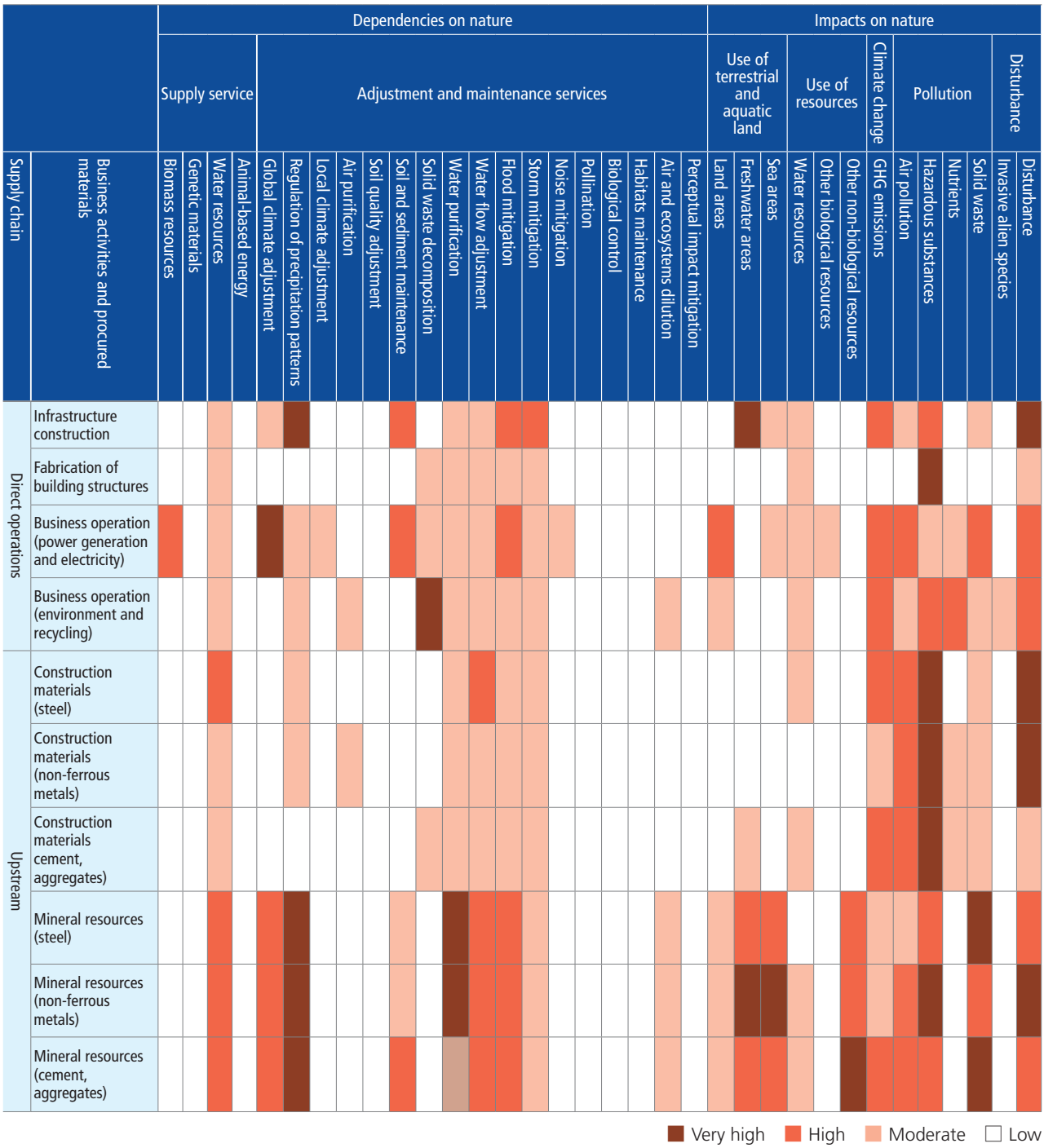
	Category		Item	Impact	Magnitude	Likelihood	Time Frame	Response
Upstream	Opportunity	Resource efficiency	Switch to environmentally conscious manufacturing systems	Reduced manufacturing costs through higher productivity and avoidance of fines and penalties by reducing the environmental impacts associated with waste treatment through waste reduction	Medium	High	Short term	**Effective use of co-products (dust, sludge, and slag) and byproduct gases generated in the steelmaking process** • Reuse iron-rich dust from blast furnaces and converters and water-treatment sludge as steelmaking raw materials • Effectively use steel slag as cement and civil engineering materials and promote its use as environmental restoration material, including Marine Stone™, which serves effectively as a base for organism attachment and as a material for improving marine environments • Recover byproduct gases generated in the steelmaking process and use them as fuel for reheating furnaces on rolling lines and for in-house power generation facilities
		Nature preservation and restoration	Biodiversity conservation at factories	Enhanced reputation among stakeholders, including local residents, by promoting initiatives on Company premises in response to growing public interest in nature and biodiversity conservation	Small	Medium	Medium term	**Biodiversity conservation initiatives on Company premises, mainly at the Chita Works** • Reproduction and conservation of the ecosystem of the Chita Peninsula, Aichi Prefecture, at Biotope Chita • Biotope Chita certified as a Nature Symbiosis Site • Chita Works certified as an Aichi Biodiversity Company • Transplanting of rare plants within planned construction areas
	Physical risk	Acute	Intensification of extreme weather	Instability of raw material procurement and increased procurement costs due to increased frequency and severity of natural disasters	Medium	Low	Medium term	**Response policy** • Diversification of procurement sources • Sharing and promoting the JFE Steel Procurement Guidelines • Monitoring suppliers' ESG-related activities **Specific measures currently implemented** • Ongoing diversification of procurement sources • Confirming proximity to critical ecosystems and the availability of water-risk response programs at each major supplier site
		Chronic	Water shortages and ecosystem degradation	Instability of raw material procurement and increased procurement costs due to ecosystem degradation such as depletion of water resources	Medium	Low	Long term	
	Transition risk	Policies and regulations	Strengthening of mining regulations	Increased procurement costs due to decline in new mine development caused by expansion of protected areas	Medium	Low	Long term	
				Increased procurement costs due to tighter regulations on environmental impacts such as pollution and water use during mining	Medium	Low	Long term	
		Reputation	Serious impacts at procurement mines	Reputational decline from sourcing at mines that seriously impact critical natural areas or local communities due to deforestation or pollution, and reduced procurement volumes due to mine shutdowns from serious impacts	Medium	Low	Long term	
		Markets	Demand for sustainable procurement	Increased compliance costs from demands by customers and investors for sustainability in raw material procurement	Low	Medium	Medium term	

Engineering Business

Specific Categories of Findings on the Dependencies and Impacts on Nature (Evaluate)

Regarding the dependencies and impacts of our engineering business on nature, we reviewed the findings under infrastructure construction and business operation categories at our sites and procurement from our upstream supply chain at iron ore and coking coal mining sites. Our procurement and infrastructure construction operations depend on the benefits provided by nature, particularly climate regulation. Meanwhile, our infrastructure construction operations impact nature through pollution and other factors. The iron ore and coking coal mining conducted upstream in our supply chain also affect nature through land use, water resource use, GHG emissions, and pollution.

Following this evaluation, we proceeded with assessments focused on infrastructure construction and upstream procurement, which have significant dependencies and impacts as well as business scale.

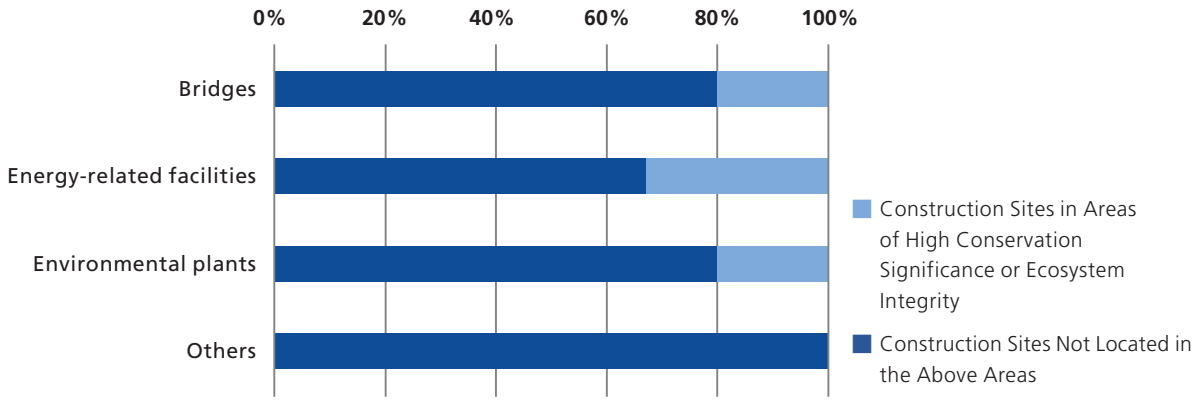


Assessment of Construction Sites (Locate)

We identified the locations of domestic construction sites of at least a certain size in 2025 and evaluated them based on the five criteria defined by the TNFD for priority areas. The evaluation found that some construction sites are in areas of high conservation significance or ecosystem integrity. Other criteria, such as water stress, were generally evaluated as low.

Roughly 20% of the construction sites are in areas of high conservation significance or ecosystem integrity, and when viewed by business type, many are energy-related facilities. At all construction sites, we confirmed that environmental assessments are conducted in advance regarding impacts on surrounding ecosystems and that additional measures are taken during construction to reduce ecosystem impacts.

Ratio of Construction Sites in Areas of High Conservation Significance or Ecosystem Integrity



Reviewing Nature-Related Risks and Opportunities (Assess and Prepare)

Following the above evaluation of dependencies and impacts, we organized the currently assumed nature-related risks and opportunities. The risks, some of which are recognized in our climate change scenario analysis, include physical risks that could materialize due to a water shortage or natural disaster and potentially trigger a decrease in production at our manufacturing sites or insufficient procurement from suppliers, apart from transition risks that might occur if regulations concerning protected areas and pollution are tightened.

Nature-Related Risks in Direct Operations

	Category		Item	Impact	Magnitude	Likelihood	Time Frame	Response
Direct operations	Physical risk	Acute	Intensification of extreme weather	Suspension of construction work and increased construction costs due to increased frequency and severity of natural disasters	Medium	Medium	Medium term	• Adoption of construction methods requiring less on-site work and development of new construction technologies • Enhance project management by using weather forecasting systems • Reduce CO_2 emissions from fuel consumption by using commercial power instead of generators
		Chronic	Water shortages and ecosystem degradation	Suspension of construction work and increased construction costs due to ecosystem degradation such as depletion of water resources	Medium	Medium	Long term	• Promote water recycling, adopt construction methods with low water use, and develop methods that account for water shortages
	Transition risk	Policies and regulations	Stricter regulations toward nature positive	Decline in new construction demand and increased compliance costs due to stricter land use regulations toward 30by30	Medium	High	Medium term	• Properly conduct construction in protected areas based on regulations and in line with the requirements of laws, municipalities, and other customers
				Increased compliance costs due to stricter regulations and monitoring requirements on environmental impacts such as pollution and ecosystem disruption during construction	Medium	Medium	Long term	• Optimize environmental assessment compliance costs by leveraging lessons learned from past construction projects • Develop efficient environmental management methods using digital technologies
		Markets and technologies	Delay in technologies addressing ecosystem considerations	Increased costs for developing and implementing technologies that contribute to nature positive and resource circulation, and loss of opportunities due to delays in response	Medium	Medium	Medium term	• Develop technologies for sorting and recycling plastics and promote new recycling businesses in collaboration with municipalities and private companies in plastic-related industries
		Reputation	Impact on surrounding ecosystems	Reputational decline due to adverse impacts on terrestrial and marine ecosystems caused by land use change, pollution, and disruption during construction	Medium	Medium	Medium term	• Plan and implement construction in line with environmental assessment results to reduce ecosystem impact risks • Reduce ecosystem impact risks through environmentally conscious initiatives during construction • Plan and implement construction based on engagement with local communities

Nature-Related Opportunities in Direct Operations

	Category		Item	Impact	Magnitude	Likelihood	Time Frame	Response
Direct operations	Opportunity	Services, markets	Efficient use of construction materials	Increased demand for repair work to extend infrastructure lifespans	Large	High	Short term	• Shorten construction periods, adopt methods requiring less on-site work, and develop new construction technologies to reduce impacts on infrastructure users
			Expansion of orders for environmental facilities	Increased demand and order opportunities for environmental facility construction such as for waste-to-energy plants	Medium	High	Short term	• Design improvements to enhance performance of existing products, develop new customers • Development of new products
			Development and implementation of ecosystem-friendly technologies	Increased demand and order opportunities through construction technologies with low environmental impact	Medium	Medium	Medium term	• Adoption of construction methods requiring less on-site work and development of new construction technologies
			Expansion of orders through national resilience measures	Expansion of order opportunities through national resilience measures to address intensifying natural disasters	Large	High	Short term	• Propose designs to customers that anticipate early restoration after disasters • Strengthen orders for seismic reinforcement and seismic isolation work on existing structures

Nature-Related Risks and Opportunities in Upstream and Downstream

	Category		Item	Impact	Magnitude	Likelihood	Time Frame	Response
Upstream	Physical risk	Acute	Intensification of extreme weather	Instability of raw material procurement and increased procurement costs due to increased frequency and severity of extreme weather events	Medium	Medium	Long term	• Consider the use of GX steel depending on construction project requirements • Require suppliers to implement GHG reduction initiatives through procurement guidelines • Develop construction technologies that reduce the use of materials with unstable procurement risks • Reduce procurement instability risks by developing new suppliers
		Chronic	Water shortages and ecosystem degradation	Instability of raw material procurement and increased procurement costs due to ecosystem degradation such as depletion of water resources	Medium	Medium	Long term	• Reduce procurement instability risks by developing new suppliers • Develop construction technologies that reduce the use of materials with unstable procurement risks • Require suppliers to reduce and effectively use resources (water, energy, raw materials, etc.) through procurement guidelines • Require suppliers to implement biodiversity conservation and sustainable use initiatives through procurement guidelines
	Transition risk	Policies and regulations	Stricter regulations on raw materials	Increased compliance and procurement costs due to stricter regulations toward nature positive in raw material mining and requirements for sustainability certification	Medium	Medium	Long term	• Reduce procurement instability risks by developing new suppliers • Develop construction technologies that reduce the use of materials with unstable procurement risks • Require suppliers to reduce and effectively use resources (water, energy, raw materials, etc.) through procurement guidelines
	Opportunity	Resource	Efficient use of construction materials	Reduction of natural impacts and cost savings in procurement through efficient use of construction materials, leading to reduced procurement volumes	Medium	Medium	Short term	• Implement environmentally conscious designs that require fewer materials • Further promote the use of recycled materials • Adoption of construction methods requiring less on-site work and development of new construction technologies
Downstream	Transition risk	Policies and regulations	Expansion of responsibility scope for impacts on nature after construction	Increased monitoring costs and reputational decline due to construction of facilities with significant natural impacts during operation (expansion of responsibility scope)	Medium	Medium	Long term	• Plan and design facilities from a life cycle perspective to reduce environmental impact risks

Measures to Address Impacts and Risks in Areas of High Conservation Significance or Ecosystem Integrity

The evaluation of construction sites in FY2025 confirmed the presence of sites in areas of high conservation significance or ecosystem integrity. Actions were taken at construction sites in these areas to avoid and mitigate impacts on ecosystems, as shown below.

Examples of Measures Implemented at Construction Sites in Areas of High Conservation Significance or Ecosystem Integrity

Example: Construction of an environmental plant in Prefecture A

The site was confirmed to be adjacent to a protected area and to have high ecosystem integrity, and the following actions were taken during construction.

- Temporary drainage ditches and earth dikes were installed around the perimeter of the work area to prevent turbid water from flowing off the construction site
- An environmentally sound dust suppressant was applied to the soil surface, and mist was sprayed to prevent dust from soil stockpiled for long periods
- Low-noise, low-vibration hybrid excavation machinery was used wherever possible to reduce noise and vibration

Example: Construction of an energy-related facility in Prefecture B

The site was confirmed to be adjacent to a protected area and to have high ecosystem integrity, and the following actions were taken during construction.

- Important plant species identified within the development area before construction were transplanted outside the area prior to the start of work
- All excavated soil was reused for embankment work within the construction site so that it would not need to be transported off-site
- Embankments and slopes were promptly compacted and protected to prevent dust dispersion and soil runoff

Metrics and Targets

We monitor environmental performance and set targets, and many of these metrics are aligned with the TNFD framework. For the TNFD disclosure metrics that are not yet subject to monitoring and target setting, we will prepare for future data collection.

ST JFE Steel EN JFE Engineering SH JFE Shoji

Items Monitored	Target Operating Company	Metrics	Correspondence to TNFD Metrics (Global Core and Additional)	Performance
Water resources	ST EN SH	Water intake	A3.0	P.282
	ST EN	Water discharge	C2.1	P.282
	ST	Water recycling volume	A3.2	P.282
Pollution	ST EN	Hazardous substance emissions (PRTR)	C2.4	P.279
	ST EN	Hazardous substance emissions (COD)	C2.1	P.278
	ST	Hazardous substance emissions (SOx/NOx)	C2.4	P.278
Resource circulation	ST EN	Resource input volume	—	P.280
	ST EN	Co-products/waste emissions	C2.2	P.280
Use of resources	ST	Water intake and consumption from water-stressed areas	C3.0	No intake from water-stressed areas (Japan)
Risk	ST EN SH	Fines due to negative impacts on nature	C7.2	0 yen (Japan)
Opportunity	ST EN	Beautification/greening expenses at production sites	C7.3	Approx. 0.6 billion yen (Japan)

Items with Set Targets	Target Operating Company	Metrics	Correspondence to TNFD Metrics (Global Core and Additional)	Performance
Reduction of chemical substance emissions	ST	Reduction of chemical substance emissions	C2.4	P.278
Resource use	ST	Recycling of co-products	A2.1	P.280
	EN	Recycling rate at construction sites	A2.1	P.281
	EN	Recycling rate of office recyclable waste	A2.1	P.281
	SH	Expand product lineup, contributing to resource circulation	C7.4	Initiative starting in FY2025
Effective use of water resources	ST	Efficient use of water resources	A3.0	P.282

Nature-Related Management Metrics

As part of overall risk management, we identify, analyze, and evaluate water risks based on past incidents of droughts and floods affecting the JFE Group's businesses, forecast data from the Japan Meteorological Agency, and the results of our scenario analysis. In particular, we consider as key risks the damages to business sites and disruption of the supply chain caused by restrictions on water intake due to droughts or increasing severity of meteorological disasters. In response, we are further reinforcing measures such as using recycled water, securing alternative means, and strengthening drainage facilities.

ST Water Risk Assessment and Measures

JFE Steel identifies and evaluates water-related risks based on past incidents of damage caused by droughts and floods, forecast data from the Japan Meteorological Agency, and results of scenario analysis. We conduct a further evaluation of water risks around each manufacturing site from different perspectives by also using the World Resources Institute (WRI)'s Aqueduct, a mapping tool for evaluating overall water risks from droughts and floods in each region around the world. According to the WRI's assessment in June 2024, water risks at JFE's main steelworks and production sites are not designated at a high level or above, but there will be risks of water shortages and flooding due to weather conditions in the future (2030s and 2040s). JFE Steel identifies manufacturing sites under such weather risks and takes measures such as business continuity planning.

ST Raised Effluent Standards to Reduce Water Resource Pollution Risks in Iron and Steelmaking Processes

JFE Steel strives to reduce its environmental impact on waterways by thoroughly purifying water used in iron and steelmaking processes before releasing it into public waterways or sewers. The company has concluded agreements with the administrative entity in each area that set out more rigorous effluent standards, compared to those stipulated under the Water Pollution Prevention Act. It also established a strict voluntary control standard to improve water quality. For FY2025, COD*, the water quality index for wastewater, was 2.3 tonnes per day.

*Chemical Oxygen Demand (COD) is an indicator for water pollution in seas, oceans, lakes, and ponds. It represents the amount of oxygen (mg/l) consumed when pollutants present in water, such as organic matter, are oxidized.

EN Proper Management in Accordance with the Water Pollution Prevention Act and Sewerage Act

Wastewater from the JFE Engineering Yokohama head office, Tsurumi works, Tsu works, and the Kasaoka Monopile Factory is released into public waterways or sewer systems. Nitrogen, phosphorus, and COD in the wastewater are measured on a regular basis and effectively managed in accordance with the Water Pollution Prevention Act and Sewerage Act.

For more on quantitative data related to water, please refer to:
> Environmental Data (P. 273)

Main Initiatives for Biodiversity Conservation and Nature Positive

The JFE Group endorses and participates in the Challenge Zero initiative jointly sponsored by Keidanren and the Japanese government. We are also collaborating with Yokohama City on a project that uses steel slag products to improve the marine environment while also undertaking efforts for biodiversity conservation and nature positive.

> **Challenge Zero** (https://www.challenge-zero.jp/en/member/37)

ST Complete Chromate-Free Hot-Dip Galvanized Steel Sheets

Chromate treatment using hexavalent chromium (Cr^{6+}), an environmentally hazardous substance, has been employed to improve the corrosion resistance of hot-dip galvanized steel sheets, mainly used in the electrical and building materials sectors. We developed steel sheets that deliver performance equal to or greater than that of chromated steel sheets without using hexavalent chromium, and by having customers evaluate the stable performance of these products, we achieved complete chromate-free hot-dip galvanized steel sheets in 2020.

ST Contributing to Biodiversity and the Creation of an Attractive Seaside Town by Utilizing Steel Slag Products (Partnership Agreement with Yokohama City)

Silty sediment (sludge containing large amounts of organic matter) piles up on the seabed along the seaside frontage of Yamashita Park in Yokohama City, Kanagawa Prefecture, and significantly deteriorates water quality in summer. As a result, the ocean's ability to function as a spawning ground or environment for nurturing organisms has been lost.

In a joint research project with Yokohama City, JFE Steel is restoring the intrinsic ability of the waters to purify seawater with the help of marine organisms by using steel slag products to create rocky habitats that provide attachment surfaces for marine organisms and assist in improving the marine environment. Immediately after the experiment began, we observed an increase in the presence of marine organisms such as starfish and sea cucumbers around the area, and the populations continued to grow. Moreover, we estimated that 8,400 kl of seawater (equivalent to seventeen 25-meter swimming pools) is filtered per day by filter-feeding marine creatures such as bivalves and sea squirts. We also estimated their impact on the removal of COD and the reduction of CO_2 in comparison to results obtained through water purification at sewage treatment plants.

This public-private initiative to improve the marine environment has earned public recognition, with Yokohama City and JFE Steel jointly receiving the FY2021 Environmental Award of the Japan Society of Civil Engineers*1. In 2022, JFE Steel also received the Minister of Land, Infrastructure, Transport and Tourism Award at the 5th EcoPro Awards*2, sponsored by the Sustainable Management Promotion Organization (SuMPO). Following these awards, a commemorative sign displaying the results was installed near the balcony facing the waters in front of Yamashita Park so that more people can learn about the initiative.

These results are also used to raise environmental awareness among local communities through numerous exhibitions and events, including Hamatora FES*3 and Tokyo Bay Dai-Kanshasai*4.

*1 The Japan Society of Civil Engineers Award is a prestigious award with a history of over 90 years. The Environmental Award (Group-2) is given to an innovative project that has contributed to any combination of environmental preservation, improvement, and creation activities by developing or operating civil engineering technologies or systems.

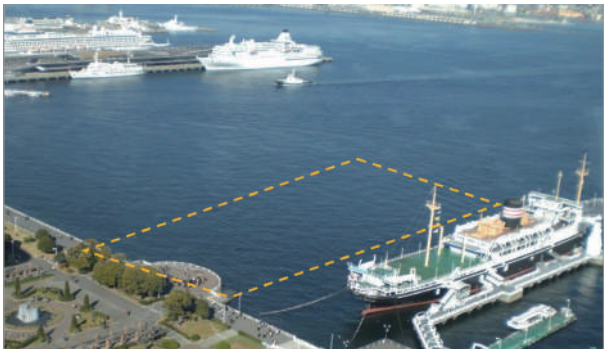
*2 The award is given to goods, services, technologies, solutions, or business models with specific and outstanding eco-friendly attributes that are widely recognized by businesses, consumers, investors, and market players in the Japanese market.

*3 Hamatora FES is the short name for the Yokohama Triathlon Festival. This is one of Japan's largest triathlon (swim, bike, and run) festivals, bringing together a variety of booths for triathlon, other sports, official event merchandise, food and beverages, and environmental PR. Organized by the World Triathlon Championship Series Yokohama Organizing Committee.

*4 A public-private partnership event in which citizens, companies, and organizations, as well as the national and local governments, work together to restore Tokyo Bay and promote co-existence with nature. Organized by the Tokyo Bay Dai-Kanshasai Executive Committee and the Tokyo Bay Renaissance Public-Private Partnership Forum.

> **FY2021 Environmental Award of the Japan Society of Civil Engineers** (https://www.jsce-int.org/node/780)

> **The 5th Eco Pro Award (Japanese only)** (https://sumpo.or.jp/seminar/awards/5th_eco-pro_award_results.html)



The dotted line indicates the area in which slag products are being used at Yokohama Bay (photo taken by Yokohama City)



Colony of sea squirts on Frontier Rock™



Signboard commemorating the partnership project (installed in September 2023)



Hamatora FES (May 2026)

ST Agreement Concluded on the Demonstration Project for Blue Carbon Creation at the Hota Fishing Port

In March 2025, JFE Steel entered into a collaboration agreement with Chiba Prefecture, the Hota Fishery Cooperative Association in Kyonan Town, and Kyonan Town for a demonstration project to restore seaweed beds.

In Chiba Prefecture, shallow coastal areas host many rocky reefs and tidal flats with widespread seaweed and seagrass beds. Recently, however, the destruction of seaweed beds has been spreading in the Uchibo coastal area. Although there are several theories about why this is happening in Chiba's coastal waters, the main causes are thought to be rising seawater temperatures and damage caused by herbivorous fish. The demonstration project began in April 2025 and is scheduled to continue through March 2028. Steel slag products (artificial stone) rich in iron, which is essential for seaweed growth, are wrapped with seed strings containing seaweed seedlings and placed in the sea. To confirm the effects of seawater temperature and herbivorous fish, which are considered causes of the destruction of seaweed beds, seaweed growth will be monitored under varying conditions, including seaweed species and water depth.

This demonstration project is intended to create blue carbon* and improve fishery productivity by enhancing the marine environment.

*Blue carbon refers to CO_2 sequestered by growing seaweed and other marine vegetation.



From left: Ms. Yoko Inoue, Director General, Environmental and Community Affairs Department, Chiba Prefecture; Mr. Eiji Katayama, General Manager, Slag Business Planning Division, JFE Steel Corporation; Mr. Harukazu Shiraishi, Mayor of Kyonan Town; Mr. Shigeo Murai, Representative Director and President, Hota Fishery Cooperative Association

Commemorative photo with participants (April 2025)

ST Advancing Biodiversity Verification of Steel Slag Products in Collaboration with Venture Businesses

JFE Steel keeps a water tank containing the coral-covered steel slag products Frontier Rock™ and Marine Block™ in the exhibition area at the reception of the head office, offering visitors the opportunity to watch coral and tropical fish while learning about our initiative to preserve the ecosystem using steel slag products. We also intend to conduct experiments inside the tank. Innoqua Inc.*1 is providing technical support for the exhibition, which has been featured by several newspapers and TV programs as an example of business collaboration in the field of the environment. JFE Steel also participates in the Setouchi Nagisa Forum*2, a seaweed-bed and tidal-flat restoration project established by Innoqua, and collaborates on marine environmental conservation in the Seto Inland Sea region using steel slag products.

*1 A venture company engaged in the development of systems for managing and nurturing corals and fish by combining its aquarist know-how with IoT and AI.

*2 Participating members include companies, universities, municipalities, and fisheries cooperatives located along the Seto Inland Sea. The project aims to conserve biodiversity and revitalize local economies through regional collaboration, beginning with the restoration of seaweed beds and tidal flats



Healthy coral attached to and steadily growing on Frontier Rock™ installed in the tank

ST The Biotope Chita Initiative to Reproduce and Conserve the Local Ecosystem

To commemorate the 80th anniversary of its opening in 2023, the JFE Steel Chita Works established and developed Biotope Chita within the plant premises to recreate and conserve the Chita Peninsula's ecosystem. Of the approximately 2 ha of site area, 1 ha had already been developed as a green belt in 2013. We are creating habitats at Biotope Chita for living organisms and conducting community-based events in collaboration with the local area.



Biotope Chita overview



Rice planting event

ST The Chita Works Certified as an Outstanding Aichi Biodiversity Company

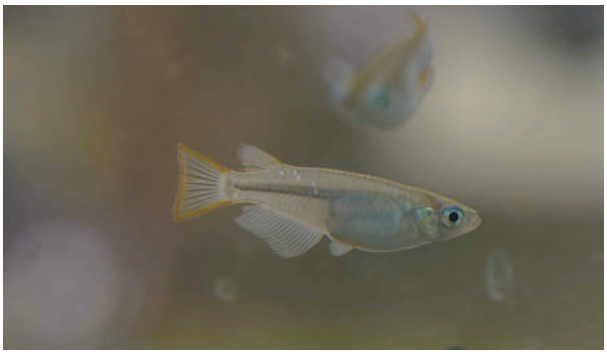
In November 2025, our Chita Works was certified as an Outstanding Aichi Biodiversity Company under the Aichi Biodiversity Company Certification Program launched by Aichi Prefecture and based on the Aichi Biodiversity Strategy 2030. The program is intended to encourage more businesses in the prefecture to play a pivotal role in preserving local biodiversity by certifying those that have implemented outstanding initiatives to do so.

We have used Biotope Chita at the Chita Works since FY2022 to create green spaces that attract the chestnut tiger butterfly, a species that migrates more than 2,000 kilometers across Japan, and we have partnered with municipalities in the Chita Peninsula of Aichi Prefecture to exchange information on butterfly arrivals. We are also engaged in conservation activities for native species such as the Japanese rice fish (Oryzias latipes) and Japanese honeybee (Apis cerana japonica). We have further strengthened our initiatives since FY2024 by undertaking ex-situ conservation of wetland plants.

Certified
Aichi Biodiversity Company



Chestnut tiger butterfly



Japanese rice fish

ST Biotope Chita Certified as a Nature Symbiosis Site

Biotope Chita, the biodiversity conservation base of the Chita Works, was certified as a Nature Symbiosis Site by the Ministry of the Environment, the Ministry of Agriculture, Forestry and Fisheries, and the Ministry of Land, Infrastructure, Transport and Tourism.

A Nature Symbiosis Site is an area that promotes biodiversity conservation through private initiatives and other efforts. The system was launched in 2023 and codified into law in 2025 under the Act on Promoting Activities to Enhance Regional Biodiversity. This legislation expanded the scope of certification to include areas where initiatives are undertaken to conserve or create natural environments for the future. In 2025, a portion of Biotope Chita (0.66 ha) was certified as a Nature Symbiosis Site as part of the Chita Peninsula Greenbelt*1. The newly certified area covers 0.8 ha developed in 2023. The area was independently certified as a "creation type" Nature Symbiosis Site in recognition of efforts to create a natural environment in which native plants and animals can live and grow.

*1 The Chita Peninsula Greenbelt (76.33 ha) is a forest belt in the coastal industrial area of the Chita Peninsula. In 2011, efforts began under the Inochi wo Tsunagu Project, a wide-area collaboration focused on biodiversity. Activities include improving the quality of green spaces, creating pathways for species to move freely between green spaces, and creating habitats for living organisms.

自然共生サイト認定
30by30

ST Initiatives for Blue Carbon Using Steel Slag Products and Acquisition of J Blue Credit™

In recent years, research on blue carbon (carbon absorbed and stored by living organisms in the ocean) has been advancing. We are also creating seaweed beds using steel slag products and measuring the total carbon absorption of these beds.

JFE Steel has been promoting the research while creating a seaweed bed using steel slag products and measuring the amount of carbon captured by the entire bed. The company has been collaborating with Koujiro Fisheries Cooperative (Iwakuni City, Yamaguchi) and the National Institute of Technology, Ube College (Ube City, Yamaguchi) on a project to create a seaweed bed and ecosystem using recycled materials in areas around Shinto, Iwakuni City, since FY2012. The initiative involves creating a seaweed bed with rich biodiversity using Marine Stone™, a grain-size-adjusted steel slag, and other steel slag products, and measuring CO_2 absorption of the created beds. Iwakuni City joined the project in FY2023. The cumulative amount of CO_2 absorbed and stored from 2018 to 2023, which totaled 81.4 tonnes, received J Blue Credit™ certification by the Japan Blue Economy Association. This was the first certification ever given to a three-party joint project by the Fisheries Cooperative, academia, and private business. The seaweed bed created through the project had the co-benefits of offering a gathering place for a diverse range of fish species. Additionally, the sea area is used for education and research.

In recognition of this initiative, the project partners and JFE Steel jointly received the Ministry of Agriculture, Forestry and Fisheries Prize at the 32nd Global Environment Award*1 in 2024 and the WAVE Award at the Blue Infrastructure Award*2 in 2025.

JFE Steel is also participating in the Creating Tidal Flats Using Recycled Resources in the Inner Harbor of Fukuyama Port project with Hiroshima University, The Chugoku Electric Power Co., Inc., and Fukuyama City, Hiroshima Prefecture. The project calculates the amount of carbon absorbed by microalgae growing on the tidal flats. The calculated carbon absorption of 17.6 t-CO_2 from February 2023 to January 2024 received J Blue Credit™ certification from the Japan Blue Economy Association. Going forward, JFE Steel will continue to contribute to creating multifaceted environmental value, including CO_2 absorption, water purification, and enhanced biodiversity, by expanding the applications of steel slag products.

*1 The Global Environment Award recognizes environmental preservation and related efforts that will help establish a circular society for a "harmonic coexistence between industrial development and the environment of the Earth."

*2 Established to help ensure that valuable waterfront spaces in ports are passed on to future generations in an even richer state and contribute to the expansion of blue infrastructure aimed at achieving carbon neutrality.

› The 32nd Global Environment Award (Japanese only) (https://www.sankei-award.jp/eco/jusyou/)

› Selection of Award-Winning Initiatives for the 3rd National Sea Restoration and Blue Infrastructure Awards (Japanese only) (https://www.wave.or.jp/doc/2026/doc/2025_blueinfra_shou.pdf)



School of rockfish gathered around the steel slag seaweed bed



Excellent place for education and research
(photo from the National Institute of Technology, Ube College)



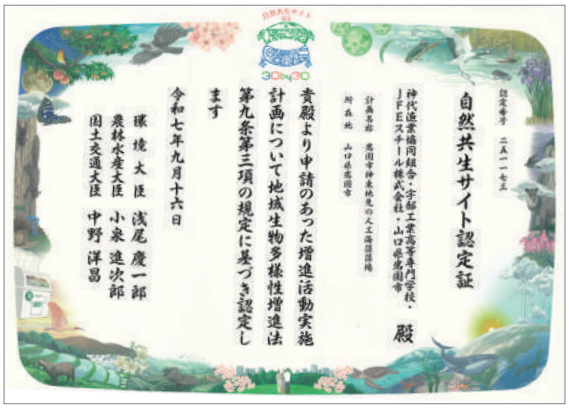
Blue Infrastructure Awards ceremony

From left: Atsushi Kurata, Director, Agriculture, Forestry and Fisheries Department, Iwakuni City; Kenji Sugimoto, Professor, National Institute of Technology, Ube College; Hiroshi Fujimoto, Representative Director and President, Koujiro Fisheries Cooperative; and Kentaro Iwai, Slag Planning Department, JFE Steel Corporation

ST Restoring Marine Ecosystems Using Steel Slag Products and Certification as a Nature Symbiosis Site by the Ministry of the Environment

Marine Stone™ is a grain-size-adjusted steel slag that controls the generation of hydrogen sulfide from silty sediment in enclosed coastal seas and improves the environment in which organisms can live. Its effectiveness in improving marine environments is widely recognized, and the joint project with Hiroshima University has received external commendations. The project to create a seaweed bed and ecosystem using recycled materials in areas around Shinto, Iwakuni City, was certified as a Nature Symbiosis Site by the Ministry of the Environment, the Ministry of Land, Infrastructure, Transport and Tourism and by the Ministry of Agriculture, Forestry and Fisheries. The Nature Symbiosis Site scheme certifies areas where biodiversity is conserved through private initiatives and other efforts, as part of measures to achieve the Ministry of the Environment's 30by30 target, which aims to effectively conserve at least 30% of land and sea as healthy ecosystems by 2030. The project was recognized for enhancing biodiversity, generating blue carbon, and utilizing the created seaweed beds as sites for environmental awareness, education, and research, leading to our first certification in an actual sea area.

Meanwhile, Frontier Rock™, an artificial stone made from a steel slag hydrated matrix, has also demonstrated excellent performance as a base for seaweed beds and fishing reefs. A submerged bank built on the seabed off the coast of Minami-Izu Town, Shizuoka Prefecture, has become a gathering place for large perennial seaweeds as well as useful fishery resources such as lobsters and a wide variety of fish.



Nature Symbiosis Site Certificate



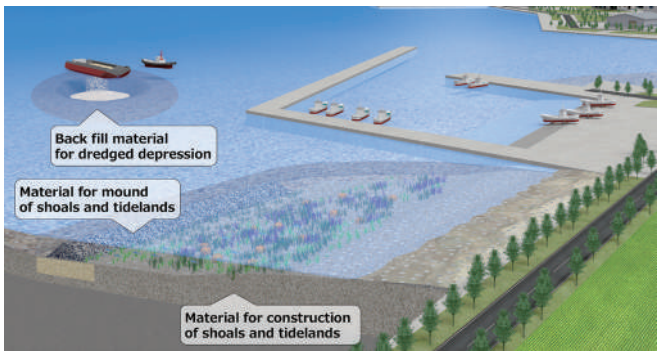
School of fish attracted to the submerged bank made of Frontier Rock™

ST Calcia Improvement Material

Calcia improvement material is a slag product that uses converter-type steelmaking slag as raw material and is manufactured by controlling composition and adjusting particle size. Dredged soil mixed with calcia improvement material is called calcia-improved soil.

Calcia-improved soil can also be used for creating shallow waters, tidal flats, and embankment material and as back fill material for deep excavation pits left by marine sand extraction. It contributes to improving the marine environment. To date, it has been used as the main embankment material for creating a shallow area (incidental facilities at the sediment disposal site, Tokuyama-Kudamatsu Port). In the Seto Inland Sea, studies are also underway to explore its use as backfill for deep excavation pits to restore former marine sand extraction sites.

› **Contribution of Steel Slag Products** (P. 136)



Application of Calcia-Improved Soil for Marine Environmental Improvement

ST Environmental Conservation and Nature Positive Designated as a Priority Area under the Policy on Social Contribution

In 2026, JFE Steel established the JFE Steel Policy on Social Contribution Activities. In promoting social contribution activities, it designated environmental conservation and nature positive as one of its priority areas, closely aligned with its business strategy. In addition to providing products, technologies, and services that contribute to these areas, JFE Steel will also undertake activities to advance environmental conservation and nature positive beyond its business operations.

EN Initiatives in the Engineering Business for the Preservation of the Natural Environment and Biodiversity

In engineering projects, at waterfronts, in mountainous areas, and in large-scale construction efforts, customers and related organizations often conduct preliminary surveys in advance, depending on the importance of conserving the surrounding environment, and various environmental protection conditions may be imposed on the work, including measures for protecting living organisms.

JFE Engineering respects the proposed conditions and thoughtfully considers biodiversity conservation by keeping the impact of construction work at a minimum. For example, it may propose a construction method that minimizes the impact of noise or drainage pollution. For its works, the status of biodiversity on its premises and in surrounding areas is checked, and necessary measures are taken to ensure preservation.

The JFE Engineering Group also undertakes initiatives that contribute to conserving the natural environment and biodiversity, including the construction of sewage treatment plants that help improve water quality in developing countries (P. 174), as well as initiatives that help address marine plastic pollution,* such as plastic recycling (P. 129), horizontal recycling of PET bottles (P. 131), and the construction and operation of waste-to-energy plants in developing countries (P. 132).

*JFE Engineering Group initiatives that contribute to addressing marine plastic pollution include the construction and operation of waste-to-energy plants in developing countries and are in alignment with the Ministry of the Environment's National Action Plan for Marine Plastic Litter, formulated in 2019. Furthermore, J&T Recycling Corporation, a group company of JFE Engineering, supports the activities of the Japan Clean Ocean Material Alliance (CLOMA), which was established to support activities that address the problem of marine plastic litter. As a member of CLOMA, the company is recycling PET bottles and plastics.

EN Completion of the Largest Sewage Treatment Plant in Hanoi, Vietnam —Contributing to the Improvement of Water Quality in Public Water Areas in Hanoi

JFE Engineering Corporation, in a joint venture with Tsukishima JFE Aqua Solution Co., Ltd., has completed the construction of the largest sewage treatment plant in Hanoi, the Yen Xa Wastewater Treatment Plant, for which the joint venture was awarded the contract by the City of Hanoi, Vietnam. The two companies were responsible for the detailed design and construction of the project. The work was completed in May 2025, and the completion ceremony was held in grand fashion on August 19.

In Vietnam, rapid urbanization accompanying accelerated economic growth has led to severe water pollution of rivers caused by domestic wastewater, and the development of sewage treatment facilities has become a pressing priority. Although the government has set a target of 100% sewerage coverage by 2050, the sewage treatment rate in urban areas remains low at around 20%.

This project consisted of constructing a sewage treatment facility designed to support a national objective. The plant is equipped with nitrogen and phosphorus removal technologies, has a daily treatment capacity of 270,000 m^3, and serves around one million people. Construction began in 2019 and, despite the impact of the COVID-19 pandemic, continued steadily, with completion achieved approximately six years later.

The project was financed by a yen loan provided by the Japan International Cooperation Agency (JICA). The facility incorporates Japanese technologies, including rapid filtration for water treatment and pipe jacking with electromagnetic detection for construction, thereby realizing the export of high-quality infrastructure.

Going forward, JFE Engineering will continue to contribute to the improvement of living environments overseas and to the realization of a sustainable society as a leading company in the field of water and sewage treatment plants, by providing Japanese technologies as well as our accumulated expertise and experience.

Project Overview

Client	City of Hanoi, Vietnam
Site location	Thanh Tri District, Hanoi
Scope	Construction of a new wastewater treatment plant
Contract amount	Approx. 12.0 billion yen (JFE Engineering share)
Completion	May 2025



Scene from the completion ceremony

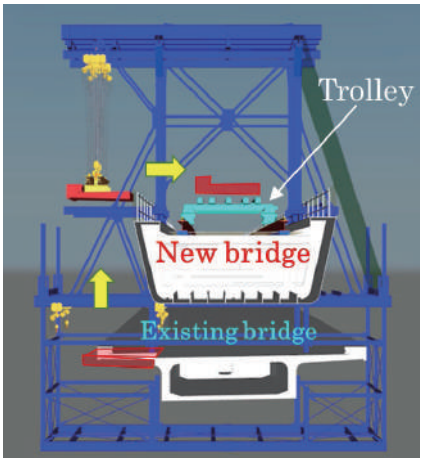

Panoramic View of the Yen Xa Wastewater Treatment Plant

EN Biodiversity Conservation in the Reconstruction of the Tedori River Bridge

The reconstruction of the Tedori River Bridge is described under the heading "Toward Realizing Longer Service Life Bridges" in the Initiatives to Transition to a Circular Economy section of this Sustainability Report 2026. The project is characterized not only by the use of stainless clad steel but also by the adoption of a special reconstruction method necessitated by local site constraints. The bridge is located at the mouth of the Tedori River, and the sandy beach beneath the girders is inhabited by the Iso-komori spider (Lycosa ishikariana) and the Little Tern, both listed as endangered species (Category II). We therefore developed a reconstruction method that avoids bringing heavy machinery onto the sandy beach to protect these rare species.

The construction method begins by assembling the new bridge on top of the existing one before its removal and then installing a removal frame on the new bridge. Using this frame, the girders are cut in mid-air, lifted onto the new girders, placed on transport vehicles, and carried out of the bridge area. This reconstruction method was developed by JFE Engineering, combining multiple techniques derived from similar experiences in urban expressway reconstruction and widening projects and applied to the site after full-scale construction trials.

› Toward Realizing Longer Service Life Bridges (P. 139)



Schematic of the girder removal procedure



Removal frame



On-site construction status
(removal of existing girders in mid-air using a removal frame)

EN JFE Engineering: Biotope for Children's Learning Experience

JFE Engineering has conducted some renovation work at the JFE Dragonfly Path in the Tsurumi Works, and since 2009 it has been inviting local residents and children to learn about the ecosystem at a biotope, Dragonfly Pond, located along this path.

The JFE Dragonfly Path Fan Club, a group mainly composed of neighborhood residents, has organized a research event that involved capturing dragonflies to help children learn about dragonfly ecology and the local natural environment.

We are also a founding member of the How Far Do Dragonflies Fly Forum, which aims to improve the quality of green spaces in the Keihin coastal area and contribute to biodiversity. The forum brings together companies, residents, governments, and experts and conducts research activities such as capture, tagging, and release of dragonflies that fly in 20 green spaces and biotopes scattered throughout the Keihin coastal area and inland areas to track their movements. The JFE Dragonfly Path also serves as a research site.

These activities were certified in 2024 by the Ministry of the Environment as a Nature Symbiosis Site under the designation "Yokohama/Keihin Forest."



Dragonfly Pond serving as a biotope

EN Participation in Kanagawa Prefecture's Reforestation Partner Program

In March 2023, the JFE Engineering Group's J&T Recycling Corporation expressed its support for the Kanagawa Reforestation 50 Year Plan and signed a memorandum of understanding with Kanagawa Prefecture on the Reforestation Partner Program, an initiative launched by the prefecture.

The company's intent is to use the program as part of its environmental protection and harmony activities while supporting the prefecture's vision. Under the partnership, the company's employees volunteer to help thin trees and take part in other efforts for conserving forests, a valuable source of water for future generations.

The Reforestation Partner Program grants naming rights to participants for parts of the prefecture-owned forests, one of which is now called the J&T Kankyo Miracle Forest (with the word "miracle" expressed in kanji, meaning the "future is coming"). J&T Recycling Corporation is constantly enhancing its ESG initiatives to improve the environment.



New employees pruned trees in a volunteer activity



J&T Kankyo Miracle Forest



Valuation report on CO_2 absorption by the forest

For details about the Reforestation Partner Program, please refer to:

› **Website for Kanagawa Prefecture (Japanese only)** (https://www.pref.kanagawa.jp/docs/pb5/partner.html)

EN Participation in Beach Cleanup Activities with Sea Turtle Network Mie

In 2017, the Governor of Mie Prefecture, the chair of Sea Turtle Network Mie, and the head of JFE Engineering's Tsu Works signed Mie Prefecture's first Mie Biodiversity Partnership Agreement to protect wildlife and raise awareness. Since then, JFE Engineering has supported the initiative by providing 5,000 awareness-raising leaflets each year and participating in beach cleanups.



Leaflet (front)



Leaflet (back)

● Beach Cleanup (Primarily Conservation Activities for Loggerhead Sea Turtles*)

Because April through August is the breeding season for the Kentish plover, the official bird of Mie Prefecture, large-scale beach cleanups during this period could cause parent birds to abandon their nests, thereby disrupting breeding. We therefore conduct beach cleanups several times between September and March along the coast, from around the Tsu Works to Yokkaichi.



Beach cleanup

*The loggerhead sea turtle is listed as Threatened IB (Endangered, EN) on the Ministry of the Environment Red List. According to the Sea Turtle Conservation Handbook (2006) by the Ministry's Nature Conservation Bureau, juvenile loggerhead turtles hatched on Japanese beaches use the Kuroshio Current to cross the Pacific, with many reaching waters off the Baja California peninsula. After maturing there, the turtles cross the Pacific again toward the coast of Japan and lay eggs on beaches. Conserving loggerhead turtles in Japan, an important nesting area, therefore also contributes to protecting populations across their trans-Pacific habitat.

EN Marine Environmental Conservation through Participation in Refresh Setouchi (Kasaoka City Coastal Cleanup Campaign)

JFE Engineering participates in the Kasaoka City Coastal Cleanup Campaign under Refresh Setouchi, organized by the Setouchi Umi-no-Michi Network Promotion Council, which comprises municipalities and other organizations along the Seto Inland Sea, thereby promoting co-existence with local communities and conservation of the natural environment. This ongoing activity has been primarily led by the Chugoku Branch. Participation increased following the establishment of the Kasaoka Monopile Factory, and the initiative has now expanded across departments.

Kasaoka City has a rich natural environment with extensive tidal flats and shallow coastal waters and is an important habitat for the tri-spine horseshoe crab, a species listed as Endangered Category I and regarded as a living fossil.

The horseshoe crab's habitat is shrinking year by year due to such factors as coastal reclamation, and marine litter washed ashore can affect spawning grounds and larval habitat. In light of these conditions, cleanup activities not only help to beautify the coast but also help to conserve valuable ecosystems, including horseshoe crab habitats.

JFE Engineering also supports conservation in collaboration with the community by participating in the Kasaoka City Horseshoe Crab Environmental Support Group, an initiative that promotes nature conservation with the horseshoe crab as its symbol.

JFE Engineering is engaged in businesses closely connected to the marine environment, including the manufacture of offshore wind power equipment such as monopiles as well as port and marine structures such as jackets, caissons, and cranes.

Because our business is closely related to the marine environment, we regard conducting business activities in harmony with this environment as a key management concern. We will continue to contribute to marine environmental conservation and the maintenance of biodiversity through collaboration with local communities.



Beach cleanup

Initiatives for Realizing Nature Positive in the Keihin Waterfront Area

The shared urban space under OHGISHIMA2050 is envisioned as a green, future-oriented venue for demonstration and interaction of advanced technologies supporting DX and GX. In collaboration with Kawasaki City, we are exploring the creation of a nature-positive urban space that fosters biodiversity.

As part of land use initiatives in the Keihin area, we are considering the promotion of CCUS projects by leveraging the expertise and know-how cultivated in advanced CCS projects, contributing to ecosystem conservation through businesses that support carbon neutrality. Land use conversion in the Keihin area involves dismantling large idle facilities such as steelmaking shops and coke plants. Through the recycling of scrap, concrete, and other materials, we are working to reduce environmental impact. At Ohgishima, we have continued operations as a steelworks rich in greenery, conducting extensive greening initiatives to create a people- and environment-friendly site. In land use conversion as well, we will aim to realize an urban environment that takes biodiversity and resource circulation into consideration.



Shared urban space (concept)

Environmental Management Activities

Environmental Management System

The JFE Group companies work to prevent environmental risks and continuously improve environmental performance through their environmental management systems. As part of these efforts, they promote ISO 14001 certification, the international standard for environmental management systems, with the aim of strengthening voluntary and ongoing environmental activities. In accordance with the requirements of ISO 14001, each registered organization reviews its environmental policy, compliance with legal requirements, achievement of targets for the previous fiscal year, and activity results. Each organization then formulates environmental targets and action plans for each fiscal year and communicates them throughout the organization.

Progress toward achieving environmental targets is periodically reported and reviewed, while implementation status and results are confirmed through internal audits and other means as necessary.

Annual activity results are evaluated through management reviews to confirm effectiveness, while issues and opportunities for improvement are reflected in the environmental targets and action plans for the following fiscal year to drive continuous improvement.

All production sites of JFE Steel and JFE Engineering, as well as JFE Shoji's major offices in Japan and overseas, have been certified, encompassing 64% of the 44,303 employees at the 82 companies covered in this report and 42% of all sites. In FY2025, there were no major violations of environmental laws or regulations by any of these companies (air, water, soil, etc.) that resulted in a fine or other penalty. Total fines and penalties were 0 yen.

For quantitative data related to ISO 14001 for each business, please refer to:

› **List of ISO 14001-certified companies** (https://www.jfe-holdings.co.jp/en/common/pdf/sustainability/environment/env_manage/iso14001.pdf)

ST Environmental Committee and Environment Management Committees Provide Appropriate Management Supervision

JFE Steel maintains Environment Management Departments at its head office and in each business office, as well as an Environmental Committee under the Sustainability Council, which is chaired by the president, and Environment Management Committees in each local office. In addition, the Management Committee deliberates and sets materialities and KPIs, including those related to the environment, and evaluates performance.

› **FY2025 KPI Results and FY2026 KPIs** (P. 19)

EN Environmental Committee Oversees Environmental Management

JFE Engineering maintains an Environment Management Department at each of its major locations, including production sites and branch offices as well as all divisions in charge of products. The Environmental Committee, chaired by the president, oversees environmental management for the entire company. Under its Environmental Management System, JFE Engineering works to minimize environmental impact at production sites, branch offices and construction sites and contribute to environmental protection through all products and services. The major strategies for FY2026 are (1) promote environmental contribution through products for mitigating global warming and climate change, (2) promote environmental protection, effective energy conservation, and resource recycling in business activities, and (3) ensure thorough compliance with environmental laws and regulations. These strategies are incorporated into related operations and implemented accordingly.

SH Expand ISO 14001 Certification Acquisition Coverage

JFE Shoji obtained ISO 14001 certification for its head office, Osaka branch, and Nagoya branch in 2000 and later expanded the scope of certification to all domestic offices. JFE Shoji also applies the same environmental management system to its domestic group companies, promoting the same environmental management activities and striving for the same certification. Overseas coil centers are also working to obtain ISO 14001 certification.

Environmental Audit

In addition to the regular internal and external audits at ISO 14001-certified sites, the audit and environment departments at each operating company's head office conduct independent environmental audits at their production sites once a year.

ST Conduct Detailed Audits

Once a year, JFE Steel's Audit Department and the Environment, Disaster Prevention and Recycling Department conduct an environmental audit at each operational site. JFE Steel categorizes Group companies based on the result of risk assessment taking into account their equipment and other factors, and it conducts detailed audits every one to five years using checklists.

In FY2025, we conducted audits of 20 Group company sites.



Document audit at a domestic Group company



On-site audit at a domestic Group company

EN Conduct Audits to Confirm Compliance with Environmental Laws and Regulations

JFE Engineering places top priority on complying with environmental laws and regulations.

For JFE Engineering's production sites in Japan (Tsurumi, Tsu, and Kasaoka), the Safety and Environment Department conducts environmental law compliance audits as well as internal audits of the environmental management system. In addition, the department annually audits about 50 locations selected from construction sites in Japan and Group companies to confirm compliance with environmental laws and regulations. Furthermore, at JFE Engineering, internal audits are conducted at approximately 70 locations annually (including about 30 construction sites and plant operation sites) to evaluate the effectiveness of initiatives for improving environmental performance and take remedial action. Annual environmental inspections to confirm compliance with environmental laws are conducted for each construction project by the responsible departments, and self-checks of legal compliance are carried out every year at production sites (Tsurumi, Tsu, and Kasaoka).

SH Conduct Internal Audits and Environmental Audits

The JFE Shoji Group conducts internal environmental audits once a year for its ISO 14001-certified group companies, and environmental audits are conducted once every three years for non-certified group companies to confirm on-site compliance with laws and regulations. In FY2025, we conducted internal audits of all 54 ISO-certified organizations and environmental audits of 12 non-certified companies.

For quantitative data related to environmental audits, please refer to:
› **Environmental Data** (P. 273)

Environmental Education

The JFE Group actively provides education to foster a corporate culture of environmental protection. Education at operating companies includes training for new recruits and newly promoted employees as well as specific environmental-protection training by position and job.

For groupwide environmental training, we hold an annual Review Session on Environment-Related Laws and Regulations, to which lawyers specialized in environment-related laws and regulations are invited to give lectures on the latest information related to the enactment and revision of these laws, as well as associated violations and court decisions. Employees from wide-ranging departments, including the environment, disaster prevention, legal affairs, general affairs, and manufacturing departments of the operating companies and their group companies, who are involved in environment-related activities, attend these annual sessions as the basis for planning their activities, such as educating employees and raising awareness of environmental laws and regulations across the Group.

ST Promote Acquisition of Pollution-Control Manager Qualifications

JFE Steel encourages employees to obtain qualifications as pollution-control managers, and it implements a training program for environmental managers at Group companies. JFE Steel also provided employees with training to ensure compliance with environmental laws, disseminated information about regulatory revisions at its Environmental Liaison Committee meetings for Group companies, and organized brush-up training in waste management skills for on-site personnel.

EN Provide General Environmental Education

JFE Engineering educates all employees, including those at its group companies, about environmental issues to increase their understanding of the company's policies and initiatives. To ensure proper environmental management at production and construction sites, training is often tailored to specific employee operations, helping to enhance their capabilities. In FY2025, we improved the video materials distributed for environmental law education to make the content easier to understand.

SH Provide General Environmental Training and Specialized Training for Internal Auditors

JFE Shoji provides all employees with general environmental training in compliance with ISO 14001 and specialized training for internal audit staff. All employees within the scope of certification receive a pocket-size ISO Employee Card to carry with them so they can check the details of ISO 14001 activities at any time. In addition, each company performs a self-check using its own extensive checklist to ensure understanding and rigorous compliance with environmental laws. Also, JFE Shoji provides environmental training to new executives and information about revised laws and regulations to environmental management personnel.

Environmental Impact Reduction Initiatives

The JFE Group regards co-existence and mutual prosperity with local communities, the global environment, and society at large as a critical managerial challenge in terms of business continuity. It strives to control air and water pollutant emissions and aggressively invests in environmental protection. Related internal controls and education are steadily being strengthened as well. Also, the transfer and widespread application of proprietary technologies, mainly in developing countries, contribute to pollution prevention on a global scale.

For quantitative data related to reducing environmental impact, please refer to:
› Environmental Data (P. 273)

Controlling Air Emissions

ST Initiatives to Further Reduce SOx and NOx Emissions

JFE Steel is installing low-nitrogen oxides (NOx) burners in reheat furnaces, switching to low-sulfur fuels and deploying desulfurization and denitration devices in sintering plants, all major sources of sulfur oxides (SOx) and NOx emissions. It has concluded agreements with local administrations that stipulate conditions that are stricter than the total volume restrictions required by the Air Pollution Control Law. The company is continuing to further control emissions at a level that is less than the amount set forth in the agreement. In addition, the company suppresses dust dispersion through measures that include enhancing on-site cleaning, installing sprinklers and windbreak fences in raw material yards, and improving the performance of dust collectors.

EN Appropriate Management in Place to Restrict SOx and NOx Emissions

To ensure compliance with the Air Pollution Control Law and relevant local regulations, JFE Engineering properly manages facilities that emit soot and smoke at its Yokohama head office, Tsurumi works, and Tsu works, so NOx and SOx emissions from those facilities are maintained at a level sufficiently lower than the total annual volume restriction (NOx: 18,000 Nm^3, SOx: 100 Nm^3).

Environmental protection efforts are underway at construction sites and plant operation sites through the exclusive use of construction machinery and on-site vehicles in compliance with the Automotive NOx and PM Law and the Act on Regulation, Etc. of Emissions From Non-road Special Motor Vehicles (Off-Road Vehicle Law).

In addition, we strive to prevent leakage at the Yokohama head office, Tsu works, and Kasaoka Monopile Factory and at temporary locations such as construction sites by inspecting equipment using fluorocarbons and ensuring proper disposal in accordance with the Fluorocarbons Emission Control Act.

Management of Chemical Substances and Emission Control

ST Initiatives to Reduce VOC Emissions

JFE Steel lowers its environmental impact by voluntarily reducing the chemical substances it releases. Release and transfer amounts of substances subject to Japan's Law concerning Pollutant Release and Transfer Register (PRTR Law) are reported in accordance with the law.

The Japan Iron and Steel Federation formulated a voluntary action plan to reduce VOC emissions by 30% from FY2000 levels by FY2010. As part of this action plan, JFE Steel set a target for reducing emissions to 1,078 tonnes or less. As a result of our initiatives, we achieved a significant reduction that exceeded the 30% reduction target in FY2010 and have been consistently cutting VOC emissions by more than 50%, with reductions exceeding 60% since FY2020. Going forward, we will continue to maintain emissions at 1,078 tonnes or less and take the necessary steps to prevent any increase.

Emissions of benzene and dichloromethane are kept at low levels. We will continue to set targets for the two substances and maintain low emissions levels.

EN Management of Chemical Substances in Accordance with the PRTR Law

Major chemical substances subject to the PRTR Law for the JFE Engineering works in Tsurumi, Tsu, and Kasaoka include organic solvents such as xylene used for painting products, and manganese and its compounds generated during welding. We report the release and transfer amounts of these substances in accordance with the law.

PCB Waste Management at JFE

Polychlorinated biphenyl (PCB) waste is properly stored and managed at the JFE Group's facilities. High-concentration PCB waste has been treated under the guidelines set by the Japan Environmental Storage & Safety Corporation (JESCO), and the treatment is almost complete. Low-concentration PCB waste is being treated under contracts with certified detoxification contractors. The Yokohama Eco Clean Plant of J&T Recycling Corporation treats insulating oil contaminated with slight amounts of PCB, helping to reduce pollutants both in and outside the JFE Group.

Environmental Accounting

Basic Policy

The JFE Group is saving energy and reducing its environmental impacts by making its production facilities increasingly efficient and introducing more environmentally friendly equipment. Any equipment or facilities related to energy conservation and environmental protection are categorized as environmental investment, while all activities related to environmental protection and impact reduction are categorized as environmental expenses.

Through these environmental investments and expenses, we are working to lower unit-based CO_2 emissions to prevent global warming and to reduce final-disposal waste by maintaining a high recycling rate to effectively use natural resources. We are also striving to reduce emissions of pollutants into the water and air, which contributes to environmental protection and ensures thorough compliance with statutory regulations concerning exhaust gas emissions and discharged water.

For quantitative data related to environmental accounting, please refer to:
› **Environmental Data** (P. 273)

Related Links

› **Material Flow** (P. 273)
› **JFE Steel: Environmental Initiatives (Japanese only)** (https://www.jfe-steel.co.jp/research/environment.html)
› **JFE Engineering: 360° JFE Engineering—Protecting Natural Environments** (https://www.jfe-eng.co.jp/en/360_jfe_engineering/#env)
› **JFE Shoji: Environment Management Activities** (https://www.jfe-shoji.co.jp/en/sustainability/environment/)

Social: Executive Summary

The mission of the JFE Group is to establish its position as an indispensable company supporting people's daily lives, driving sustainable development and ensuring safe, comfortable lives for all. Through our efforts to address social issues, such as investing in human capital, and by respecting human rights across the supply chain, we intend to achieve the sustainable growth of the Group and become an entity that continues to develop and provide safe, high-quality products and services based on our leading technologies.

The human resources strategy of our Eighth Medium-term Business Plan stands on two pillars: establishing a talent portfolio for achieving management strategies, and maximizing human resource talent. Efforts to realize these pillars include diversifying recruitment sources to respond to business expansion and intensified hiring competition, strategically developing talent aligned with management strategies, encouraging the active participation of diverse human resources, and enhancing employee engagement.

With the belief that respect for human rights is foundational for business as well as a corporate social responsibility, we have been taking action to realize a society in which human rights are respected and protected. We have also been conducting human rights due diligence since FY2021 in accordance with the United Nations Guiding Principles on Business and Human Rights. In 2023, we revised the JFE Group Human Rights Basic Policy in light of recent changes in awareness and issues related to human rights. We will continue to promote Groupwide efforts as well as seeking cooperation from all stakeholders including our supply chain to respect and protect human rights.

It is important to cooperate and collaborate with society as we carry out our corporate activities globally. By actively contributing to those communities, we hope to achieve sustainable growth for both our businesses and society at large.

Targets and Results for Material Issues of Corporate Management Concerning Society (Materiality)

› **FY2025 KPI Results and FY2026 KPIs** (P. 19)

Key Initiatives

- Promote a **human resources strategy** (P. 186) linked to management strategy.
- **Promote talent acquisition and development** (P. 188) aligned with management strategies such as overseas expansion and DX promotion and establish a talent portfolio.
- Proactively **promote DEI** (P. 190), including encouraging the active participation of diverse human resources, especially female employees, and fostering a culture that embraces diversity. We are also working to **improve work engagement** (P. 195) by deeply instilling our purpose, expanding investments in workstyle reforms, and improving workplace environments.
- As the foundation supporting these initiatives, we are promoting **occupational health and safety (prevention of occupational accidents)** (P. 202) and **health and productivity management** (P. 205), focusing on creating workplaces where everyone can work safely and in good health.
- As part of our **human rights due diligence** (P. 212), in FY2025 we extended new surveys to more overseas Group companies and conducted a second round of surveys for high-priority suppliers. We also established a grievance mechanism using an external reporting channel. In FY2026, we will conduct a second round of surveys on human rights risks at JFE Holdings and its operating companies.
- **Actively promote DX** (P. 228), including the active introduction of IoT, AI, and data science, and the application of data assets.

Human Capital

Basic Policy

In this rapidly changing business environment, the power of each employee is essential for continuously enhancing corporate value into the future. The JFE Group believes that people are the driving force of corporate growth and is promoting its human resources strategy linked to its management strategies. Under the JFE Group's Basic Policy on Human Resource Management and the JFE Group Health Declaration, the Group seeks to achieve its management strategies by maximizing employee abilities and vitality by actively investing in human capital.

The human resources strategy of the Eighth Medium-term Business Plan stands on two pillars:

① Establishing a talent portfolio to realize management strategies
- Promote talent acquisition and development aligned with each operating company's management strategies and establish a talent portfolio.
- Particularly focus on developing employees capable of supporting overseas business and DX as a common, Groupwide priority.

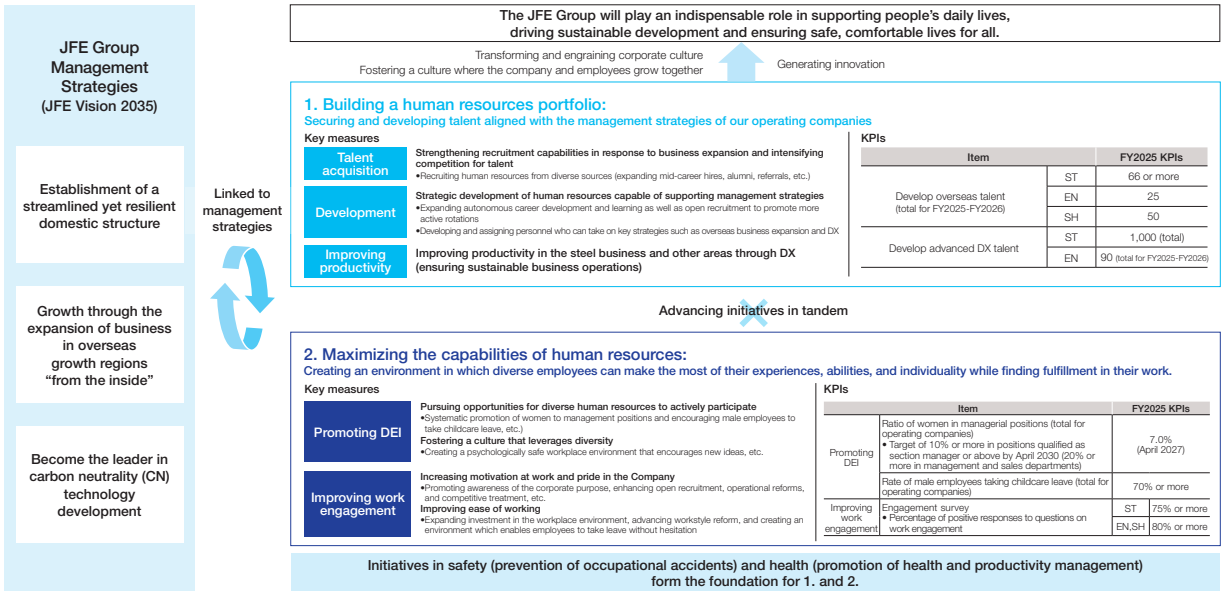
② Maximizing human resource talent
- Realize conditions where every individual in the human resource portfolio can thrive through improved work engagement.
- Realize conditions where every individual in the talent portfolio can thrive through DEI promotion.

By advancing our efforts under these two pillars, we will strive to maximize the power of our people, foster a corporate culture in which the Company and its employees grow together, and execute transformation for growth while realizing our management strategies.

These efforts are underpinned by occupational health and safety. Ensuring employee health and safety is a basic requirement for manufacturers and a foundation for continued corporate existence. Guided by its safety-first philosophy, the JFE Group aims to establish a safe working environment to achieve zero accidents. By promoting intrinsic safety through DX and effectively operating an occupational health and safety management system, it is creating workplaces where everyone at Group companies and partner companies (including contractors) can work safely and in good health. Furthermore, the Group collaborates with its health insurance union and industrial health staff to maintain and improve employee health.

We plan to invest approximately 80 billion yen (total for operating companies) in human resources during the period of the Eighth Medium-term Business Plan.

Overall Framework of the Human Resource Strategy



JFE Group's Basic Policy on Human Resource Management

❶ Respect Human Rights and Facilitate Fair Management of Human Resources

The Group manages human resources fairly by respecting the human rights of all employees and nurturing employees who embrace the Group's corporate values and standards of business conduct.

❷ Foster a Corporate Culture that Nurtures People and Promotes Satisfying Workplaces

The Group facilitates interactive communication among employees to cultivate a corporate culture that nurtures human resources and creates safe, attractive environments where everyone can enjoy working.

❸ Diversify Human Resources

The Group ensures that diverse all people, including women, non-Japanese, the elderly and the disabled, can demonstrate their full potential.

❹ Recruit and Steadily Nurture Excellent Human Resources

To survive in an increasingly complicated and diversified business environment, the Group steadily recruits diverse, high-quality skilled human resources, ensures that they receive the skills and knowledge necessary to continue strengthening the Group's technological capabilities, and nurtures their global capabilities.



Poster displayed at each workplace

JFE Group Health Declaration

❶ JFE, recognizing that health and safety are fundamental for fulfilling its mission, creates workplaces in which every employee can work with vigor.

❷ JFE and its health insurance union work together to advance initiatives for maintaining and upgrading the physical and mental health of employees and their families.

❸ JFE gives top priority to health and safety and to creating a health culture in which each employee takes personal responsibility.

Targets and Results

Having identified the promotion of talent acquisition and development, the promotion of DEI, the improvement of work engagement, the prevention of workplace accidents, and the promotion of health and productivity management as material issues related to human capital, the JFE Group has set KPIs to manage progress and promote relevant initiatives.

For KPI performance results, please refer to:
› FY2025 KPI Results and FY2026 KPIs (P. 19)

Promoting Talent Acquisition and Development

Initiatives

We are acquiring and developing talent to execute the business strategies of operating companies and building a portfolio aligned with those strategies. Amid intensifying competition for talent, we are pursuing automation and labor-saving measures through DX and establishing optimal production systems in the steel business, and building a lean, robust production system in Japan. At the same time, we are strengthening our recruitment capabilities by combining diverse sources such as career hires, alumni hires, referral hiring, and the use of scouts and agencies. Additionally, we are enhancing corporate recognition through advertising and offering competitive compensation.

From the perspective of human resource development, we are cultivating an awareness of autonomous career development by providing broad work experience through active job rotation, developing learning environments tailored to employee motivation, and expanding voluntary (self-nominated) training programs. Specialized human resource development will depend on continuously securing and developing global and DX talent to implement the Group's management strategies, such as expanding locally based overseas operations and building a lean, resilient organizational structure. We are particularly emphasizing these initiatives.

Along with strengthening recruitment, we are implementing initiatives to prevent early turnover, such as a mentor system, meetings with supervisors to discuss mid- to long-term career goals, and assigning experienced employees to guide new hires and more easily address their concerns.

For more on training results, please refer to:
› Social Data (P. 286)

ST Strengthening the Foundation of the Domestic Steel Business and Developing Human Resources for Growth and Priority Fields

JFE Steel will maintain its domestic steel business as the foundation of its operations while continuously enhancing the capabilities of its human resources. The company is building and implementing a framework to assign personnel to growth and priority fields by leveraging the depth of its workforce talents. In addition, it is reviewing the overall framework and content of its management training to ensure management practices are aligned with its established purpose, vision, and values.

ST Domestic Steel Business

JFE Steel is enhancing the quality of its human resources by encouraging and supporting autonomous career development. This includes providing diverse work experience through active job rotation, developing learning environments tailored to employee motivation, and expanding voluntary (self-nominated) training programs.

Strengthening the skills of younger employees has become increasingly important for operational staff as the generational transition progresses. In response, the company is leveraging the human resource development system at its manufacturing sites to assess and analyze individual skill levels quantitatively and apply these insights to training. Furthermore, it has set up a system for extracting and applying the tacit knowledge of veteran employees to train young staff.

ST Growth and Key Areas

JFE Steel is promoting the transition of personnel from the domestic steel business by equipping them with the skills and experience required in growth and priority areas such as overseas operations and DX. For its overseas business, it is building a pool of human resources capable of managing global operations by actively rotating mainly younger employees into overseas assignments to provide hands-on experience, as well as actively encouraging overseas study. The company introduced a new open-application overseas study program in FY2025 to further accelerate human resource development.

To promote DX, JFE Steel has reviewed the skills and knowledge required at each stage of DX personnel development while systematizing and enriching the content of training. It has redefined highly skilled DX personnel as Business Innovators, who drive business process reforms, Data Scientists, who achieve results by leveraging advanced data applications, including AI and machine learning, and Digital Designers, who leverage low-code tools to enhance efficiency and sophistication, and has certified over 800 highly skilled DX personnel to date. The company will also accelerate the development of personnel who can use the latest technology by adding the citizen development of generative AI apps to the certification requirements for Digital Designers.

EN Promoting Training Programs to Support Independent Learning and Developing DX Personnel

To enhance the knowledge of underlying technologies that represent a technological foundation for an engineering enterprise, the company's leading expert lectures over 30 different courses on basic technology for younger employees and mid-career hires. Also, a web-based learning curriculum offers employees opportunities to acquire business skills that cater to each job responsibility, including accounting and marketing.

Through these training programs, JFE Engineering provides younger employees with opportunities to grow through independent and continuous learning and strengthens the leadership capabilities of managers to transform corporate management.

Regarding the development of human resources as the foundation for promoting DX, we are providing digital literacy training to all employees and holding companywide events as well as training specialists in areas like data analysis, AI, and system development. Starting in FY2025, we have introduced training programs like rank-based DX training and DX Planner (DX Business Planner) Training to strengthen the development of personnel who plan and drive DX initiatives.

SH Training and Measures to Maximize Employee Potential

To expand the trading business in Japan and overseas, JFE Shoji has established training programs that enable personnel with diverse backgrounds to achieve growth in their respective environments. These programs include business strategy execution support workshops for developing the basic skills required of trading company personnel, such as financial strategy, strategic investment, marketing, and management, as well as practical trade training for acquiring hands-on knowledge and onboarding programs for newly hired mid-career employees, thereby further strengthening the company's competitiveness. Furthermore, employees in rank-based training are provided opportunities to learn the roles and skills required to obtain new qualifications before promotion, with the aim of enabling employees to contribute at an early stage. Other programs include the Overseas Trainee Program, which dispatches young employees to overseas Group companies early in their careers, and the national staff training program, through which talented locally hired overseas employees are invited to the head office to further boost their abilities and motivation. These programs for a wide range of employees are intended to raise the performance of the entire Group.

Programs for Developing Personnel for Overseas Operations

In addition to hiring and developing non-Japanese for career-track positions in Japan and local personnel overseas, the JFE Group is enhancing programs for Japanese employees to gain overseas study and training. The Company is also developing younger employees through practical experience by dispatching them on overseas assignments.

Global Personnel Development Programs

	JFE Steel	JFE Engineering	JFE Shoji
Study abroad	○	○	○
Short-term overseas language training	○	—	○
Overseas assignments for younger employees	○	○	○
Dispatching engineers to international conferences	○	—	—
Training for local personnel at overseas sites	○	○	○
Practical training in Japan for non-Japanese personnel at overseas sites	—	○	○
Internship for international students	○	—	—

Promoting Diversity, Equity, and Inclusion (DEI)

Initiatives

In today's rapidly changing business environment, the JFE Group believes that bringing together diverse values and perspectives generates new ideas and solutions, leading to sustained growth in corporate value. The Group has accordingly positioned the promotion of diversity, equity, and inclusion (DEI) as a key management priority. It has established a DEI promotion department in each of its operating companies to create an environment that makes the most of employees' diverse experiences, abilities, and individuality. In addition, structures such as a DEI promotion committee chaired by the president enable management and the DEI promotion departments to work together to formulate and implement Companywide policies. In particular, the Group is strategically promoting women's participation and advancement. These efforts include recruitment measures to expand the pool of potential female managers by recruiting new graduates and mid-career employees. They also include retention measures, such as expanding opportunities for internal and external networking and highlighting role models, as well as placement and development efforts such as preparing individual development plans for female employees.

ST Accelerating and Strengthening DEI

JFE Steel fosters a workplace culture in which diverse human resources can play an active role across a variety of fields, through such initiatives as training for executives and managers and activities for raising awareness through setting DEI months, including lectures and concentrated information sharing. Furthermore, directors and general managers set DEI targets every year and work on addressing issues within their own departments. Starting in FY2025, the company has been providing opportunities for directors to discuss DEI challenges and ways to address them with one another to build a shared understanding at the management level and improve the effectiveness of their initiatives.

Beyond recruiting a diverse workforce, the company systematically provides internal and external training opportunities to support each employee's growth and ability to perform from the perspective of equity. It also actively sends female employees to external training programs to support their professional growth. In response to employee feedback, the company has launched educational programs to raise awareness among potential female managers, and it has strengthened networking activities such as career exchange meetings and health seminars.

For female employees engaged in shift work, health seminars by occupational health nurses are provided to facilitate adaptation to shift work, and the human resources department periodically conducts follow-up interviews. For employees experiencing life events such as pregnancy or childbirth, interviews on work-life balance are offered, during which employees can discuss the future of their careers with their supervisor as well as the human resources department. A detailed support system has been established for employees to continue to play an active long-term role.

Looking ahead, the company will further strengthen its efforts to create a working environment where employees at various life stages can thrive while feeling a sense of fulfillment in their work.

EN Awareness-Raising Initiatives at the Company

JFE Engineering engages in activities for reforming its corporate mindset, including lectures for executives, DEI seminars for managers, e-learning programs for all employees, and the annual DEI Month.

For female employees, the company supports career development by providing opportunities for external training and networking events. To help employees balance work with childcare and nursing care, workshops are held for those returning from childcare leave, and training sessions are conducted for supervisors on childcare and nursing care. Through these initiatives, we are striving to create a workplace where employees facing life events can also thrive.

The company accepts 60 locally hired employees of overseas Group companies to provide on-the-job training. We also strive to create an environment where workers can spend their time in Japan with a sense of security, by operating a consultation desk, offering information through a portal site, and providing Japanese language classes. Every year in Japan, the company actively hires around 100 mid-career recruits possessing diverse characteristics and values, such as those with experience in other industries.

SH Initiatives to Raise Awareness within the Company

JFE Shoji is encouraging employees to understand and become more aware of promoting DEI by periodically conducting diversity seminars for the management team, diversity management seminars targeting managers including those at Group companies, and e-learning for all employees, as well as Diversity Month (every November). In addition, the Diversity Promotion Committee, comprising the management team, was established to share overall policies and develop and implement departmental plans. It also supports the career development of female employees by building networks through roundtable discussions with senior employees and actively dispatching them to external training programs and activities.

The company organizes information exchange meetings for employees on childcare leave and follow-up seminars after they return to work to ensure that employees can continue to thrive while balancing life events such as childbirth, childcare, and nursing care. As part of efforts to encourage male employees to participate in childcare, in addition to explaining the system during rank-based training, explanations are provided to eligible employees and their supervisors.

Promoting Women's Professional Development

The JFE Group is implementing a broad range of initiatives to promote women's advancement, including active recruitment, planned development and appointment of women to management positions, enhanced childcare-support programs that significantly exceed statutory requirements, and development of training and awareness-raising activities. The initiatives and issues faced by each company are shared among operating companies. They are also discussed at the Board of Directors' and other meetings in an ongoing effort to promote the initiatives. In recognition of its efforts to encourage the empowerment of women, JFE Holdings has been selected three times as a Nadeshiko Brand* since FY2013.

*A joint project of the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange. Companies are selected from among those listed on the First Section of the Tokyo Stock Exchange and announced as a company that is actively promoting the careers of female employees, including improvements to environments where women can continue to work.

Action Plan for Promoting Women's Professional Development

The Act on Promotion of Women's Participation and Advancement in the Workplace went into effect on April 1, 2016. The JFE Group has designated the promotion of workforce diversity as a key management strategy for maximizing the potential of every employee and has been actively hiring and supporting the advancement of female employees.

We formulated the following action plan in accordance with the act to establish a working environment that encourages female employees to demonstrate their abilities and create satisfying workplaces for all employees.

- Action Plan Period

Period of five years starting on April 1, 2026 and ending on March 31, 2031

- Target of the Action Plan

We have set a common goal for the JFE Group to increase the ratio of women in managerial positions at or above the section manager level to at least 10% by 2030 (at least 20% in administration and sales divisions). Under this goal, we will actively promote the appointment of women to managerial positions. As of April 2026, the ratio of women in managerial positions is 5.5% (8.8% in administration and sales divisions) for the operating companies combined.

- Action Plan for Each Operating Company

› **JFE Steel (Japanese only)** (https://www.jfe-holdings.co.jp/common/pdf/sustainability/female_plan_st.pdf)
› **JFE Engineering (Japanese only)** (https://www.jfe-holdings.co.jp/common/pdf/sustainability/female_plan_eng.pdf)
› **JFE Shoji (Japanese only)** (https://www.jfe-holdings.co.jp/common/pdf/sustainability/female_plan_shoji.pdf)

Company Policy Explained by the President

The president of JFE Holdings has endorsed the Declaration on Action that was introduced by a group of leaders in Japan who intend to create "A Society in which Women Shine" with the support of the government's Gender Equality Bureau Cabinet Office. He also announced additional measures to support the professional development of female personnel, thereby communicating both inside and outside the company that women can play active roles at JFE.

For more information, please refer to:

> **Declaration on Action by a Group of Male Leaders Who Will Create a Society in Which Women Shine**
(https://www.gender.go.jp/policy/sokushin/male_leaders/pdf/declaration_body_en.pdf)

Promotion of Childcare Leave for Male Employees

We believe that creating an environment where male employees can more easily take childcare leave will make it possible for both male and female employees to balance work and childcare, enabling diverse employees to fully demonstrate their vitality and strengths. Each operating company is promoting childcare leave for male employees through such efforts as holding seminars on childcare leave, encouraging supervisors to recommend taking the leave, and internally sharing best practices.

Employment of People with Disabilities

The JFE Group has three special subsidiaries, JFE Apple East Corporation, JFE Apple West Corporation, and Mie Data Craft Co., Ltd., to employ people with disabilities and create enjoyable workplace environments for them.

For more on the employment of people with disabilities, please refer to:

> **Social Data: Employment of People with Disabilities** (P. 288)

Programs for Employees Over 60 Years Old

To ensure that the skills and experience of veteran employees are handed down, JFE Group companies have either raised the mandatory retirement age to 65 or introduced a system that enables all employees to work until the age of 65.

As of the end of March 2026, 1,012 veteran employees (about 5% of the total) are working at JFE Steel, JFE Engineering, and JFE Shoji.

ST Passing on Techniques and Skills and Promoting Human Resource Development

JFE Steel raised its mandatory retirement age to 65 in April 2021 to increase the motivation of veteran employees in their work, pass on their techniques and skills, and steadily promote human resource development. While we used to rehire anyone who wished to continue working after reaching the age of 60, we recently established a personnel and wage system to cover all employees up to the age of 65.

EN Maintaining and Strengthening Competitiveness and Passing on Skills

JFE Engineering regards veteran employees as highly specialized experts in business and technical fields and expects them to play roles in maintaining and strengthening competitiveness while passing on their skills to the next generation of workers. To encourage their further success, we raised the retirement age to 65 in FY2023.

SH Realizing Flexible Workstyles

JFE Shoji is mindful of creating an environment that allows veteran employees over 60 to continue working with high motivation, while also seeking to realize flexible workstyles and develop a healthy working environment. Employees may choose from a variety of working arrangements, including full-time employment, shortened workweeks, and shortened daily work hours in accordance with their lifestyles.

Respect for Sexual Minorities (LGBTQ)

The JFE Group is creating a workplace that does not discriminate on the basis of gender, sexual orientation, or gender identity by conducting internal human rights seminars and position-specific training programs. LGBTQ concerns have also been incorporated into the Group's compliance guidebook, which is distributed to all employees and used as a common reference during the annual Compliance Month of October toward nurturing greater understanding. JFE Steel has revised its benefit program to extend coverage to same-sex or de facto partners from FY2022 and holds program briefings and educational training sessions. At JFE Engineering, e-learning programs are offered to all employees, and seminars are held mainly for personnel in human resources and managers. Seminars are conducted at JFE Shoji for management, including executives, and e-learning programs are offered to all employees to promote understanding.

Securing Diverse Human Resources

Recruitment Results for University Graduates (FY2026) and Mid-Career Hires (FY2025)
986 employees (total of three operating companies)

- Women in career-track positions: 18.5% (105 out of 568)
  Women in administrative career-track positions: 39.9% (75 out of 188)

- Mid-career and year-round hires: 31.2% (308 out of 986)
  Career-track employees hired through mid-career or year-round recruitment: 34.2% (194 out of 568)
  Operational employees hired through mid-career or year-round recruitment: 27.3% (114 out of 418)

To ensure sustainable growth, the JFE Group is diversifying its recruitment sources to reliably secure talent and is actively hiring diverse personnel, including women, foreign nationals, and mid-career recruits.

In addition, it has a broad overseas presence and hires employees locally, thereby contributing to communities with employment opportunities.

Recruitment Results (Three Operating Companies) for University Graduates (FY2026) and Mid-Career Recruits (FY2025)

Category	Career-Track Positions			Operational Positions	Total
	Administrative	Technical	Total		
Total	188	380	568	418	986
Male	113	350	463	397	860
Female	75	30	105	21	126
Ratio of women (%)	39.9	7.9	18.5	5.0	12.8

For more on employees, please refer to:
› **Social Data** (P. 286)

Improving Work Engagement

Initiatives

The successful execution of our business strategies depends upon every individual in the talent portfolio fully demonstrating their abilities and thriving. To this end, we are developing an environment where every employee experiences a strong sense of work engagement. Companies across the Group are actively implementing initiatives to enhance a supportive working environment, such as promoting flexible workstyles that make it easier to take leave, as well as initiatives to increase work engagement through business process reforms and revised HR systems.

To improve job satisfaction, we are focusing on broadly instilling our corporate purpose. Across the JFE Group, employees participated in discussions to determine the role each operating company should play in society and how to leverage its strengths to contribute, thereby giving form to the company's purpose. In these uncertain times, we believe that instilling this purpose helps connect each employee's work with social value, encouraging them to approach their jobs with a sense of direction and optimism for the future. We are also working on deepening awareness and understanding of, and empathy for, this purpose while encouraging employees to put it into action.

Enhancing a Supportive Work Environment and Work Engagement

JFE Holdings and each operating company conduct an annual engagement survey to quantitatively grasp employee engagement and use the results to identify issues and plan improvement measures related to work engagement. The survey includes common questions about job satisfaction, and the results are managed as KPIs to create working environments that motivate employees. In addition, we refer to the results of periodic corporate ethics awareness surveys to foster more comfortable working conditions.

The JFE Group complies with laws and regulations related to salary payments and sets wages above the minimum levels specified by country, region, and industry sector to meet living wage requirements. It also provides a challenging and fulfilling work environment by offering industry-leading employment conditions and performance-based bonuses linked to Company profits while complying with regulations such as on overtime work.

Furthermore, the Group offers generous welfare benefits, including dormitories and Company housing, to create a stable environment for employees and encourage them to remain with us for many years.

Positive Response Rate to Questions in the Engagement Survey

	FY2023	FY2024	FY2025
JFE Steel	72%	70%	69%
JFE Engineering	81%	81%	81%
JFE Shoji	80%	77%	79%

ST Initiatives to Improve Work Engagement

JFE Steel established the Human Resources Strategy Division to promote multifaceted measures, including corporate culture reforms, as a companywide initiative to boost employee job satisfaction and achieve sustainable growth. In FY2024, it launched the ReFuture PROJECT*, with the president as the project owner, as a corporate reform for enhancing employee job satisfaction so that both the company and its employees grow together. The company also provides a variety of support and initiatives to enhance employee job satisfaction, and employees in turn contribute by maximizing their abilities. Through this cycle of the company and its employees meeting each other's expectations, JFE Steel aims to build a culture that strengthens mutual trust and continuously enhances corporate value. The Culture Transformation Section, established within the Human Resources Strategy Division, leads the entire project and implements the measures on an ongoing basis in cooperation with related departments.

In the FY2025 engagement survey, the result for the common question on job satisfaction used as a KPI was 69% (total employees) against the target of 75%. By employee category, career-track employees scored 78.4%, while operational employees scored 64.3%. Both groups share the common issue of improving work efficiency. To promptly address this issue, we set up the Management Transformation Team in FY2026, an organization that drives companywide transformation and business process renewal. We recognize that securing days off and improving workstyle flexibility are key challenges for operational employees, whose scores are relatively low. We have added a 4-team, 2-shift system to the existing 4-team, 3-shift system, starting in July 2026, offering more options for shift workers in factories so they can create a way of working that increases their number of days off while maintaining productivity.

Moreover, the environment surrounding the company is changing drastically, including carbon neutrality, a declining population, and falling domestic demand. Under these circumstances, we believe it is important to clearly communicate what we want to be in the future, the reason for our existence in society, and our long-term direction, so that employees can work with their own dreams and expectations for the future. With this in mind, we formulated our corporate purpose, vision, and values, and initiatives are underway through the ReFuture PROJECT to deepen employee awareness and understanding of these statements so that they resonate with employees and inspire action.

Furthermore, in October 2024, we revised our personnel and wage systems to enhance work engagement, including a reorganization of employee classifications, an introduction of a framework for employees to choose a range of work locations to which they could be transferred, greater transparency in evaluations, and enhanced feedback.

JFE Steel is also working to promote its new workstyle to improve operational efficiency and productivity. In concrete terms, the company is promoting teleworking by expanding its work-at-home systems; introducing a coreless flexible working hour program; adopting a shared-desk policy, mainly at the head office; introducing chat and web conferencing tools and robotic process automation (RPA), a software program that facilitates the automation of work done on terminal devices; promoting paperless offices by introducing electronic contracts and workflows; and eliminating the use of seals. The company will continue to adopt workstyles that add more value through these initiatives.

In terms of employee benefits, JFE Steel introduced a cafeteria plan as an employee benefit in FY2022 to meet the diversifying needs of employees following a rise in the number of mid-career hires and other changes. The company seeks to enhance the work-life balance by encouraging employees to take paid leave by designating annual planned leave days and enhancing a work-life-balance vacation program to support employees in taking vacations for childcare, nursing care, infertility treatment, self-development, or participation in volunteer activities. Furthermore, it has increased the number of days off for general employees by 2 days per year to 121 days per year, starting in FY2024, to establish a more secure working environment for them and their families while balancing health and work.

*The name "ReFuture PROJECT" embodies the company's desire to create a new future that the world needs, by focusing on what the company wants to be in the future, especially now that the organization, founded in 2003 with the vision of becoming Japan's leading future-oriented corporate group, is in a period of dramatic change.

Key Initiatives for the ReFuture PROJECT in FY2026

Item	Outline
① Formulating our vision	Embedding our corporate purpose, vision, and values
② Operational reforms	Companywide business process reforms by the management transformation team, such as reviewing business processes, promoting digitalization, and improving operations by putting our values into practice, etc.
③ Improving the workplace environment	Realizing more comfortable working environments through focused investment in offices and other facilities, mainly at manufacturing sites
④ Reviewing personnel and compensation systems	Embedding management practices aligned with the intent of revisions, and diversifying workstyles and leave-taking among on-site employees, etc. Expanding workstyle options by adding a 4-team, 2-shift system
⑤ Transforming communication	Promoting corporate culture transformation through two-way dialogue (e.g., management ↔ employees, general managers ↔ subordinates)
⑥ Improving management/ strengthening leadership	Promoting management aligned with the corporate purpose, vision, and values through the restructuring of management training and other measures
⑦ Supporting growth and career autonomy	Expanding voluntary (self-nominated) training programs and internal transfers through open recruitment
⑧ Enhancing psychological safety and organizational climate reform	Promoting soft initiatives that lead to changes in awareness and behavior to enhance psychological safety and transform organizational culture

Purpose, Vision, and Values of JFE Steel

Purpose	**Dream for your Future, Steel takes you Further.**
Vision	● Leading the steel industry as the top runner in carbon neutrality. ● Building on a solid domestic business foundation and pursuing fresh growth through bold inroads into overseas markets, and new fields. (Profit target) FY2035 segment profits: ¥500 billion
Values	**Future-Oriented** ● Embrace Challenges, Foster Growth, and Pioneer the Future. ● Act Decisively and Shape the Future. ● Focus on the Essential and Sharpen the Core. ● Be Flexible and Think Beyond the Conventional. ● Be Open-minded with a Broad Perspective. ● Value Hands-on Experience and Grow Together.

EN Initiatives to Enhance Productivity and Improve Work Engagement through New Workstyles

JFE Engineering is working to improve work engagement from two perspectives: improving ease of working and enhancing job satisfaction.

● Improving Ease of Working

JFE Engineering is promoting vacation-style reform across the company. Employees are encouraged to take Fridays off during the summer and consecutive days of paid leave following the completion of construction work. Out of 22 days of paid leave granted, 19.1 paid leave days on average (over 86.8% of the total) were taken by employees in FY2025. The company intends to raise the average to at least 20 in FY2026.

As part of its workstyle reform, JFE Engineering has established an environment in which employees in office divisions can choose where and when to work, through the introduction of remote work and flextime programs with no core hours, to support diverse workstyles. One of these measures is teleworking, which was adopted as a permanent option in FY2021, enabling employees to work from home or any of the roughly 1,000 shared offices nationwide. To curb long working hours and safeguard employee health, the company has established a guideline recommending an 11-hour rest interval between workdays.

In the area of construction, JFE Engineering has set the reduction of working hours as a major issue and has been steadfastly working on this. Since FY2023, it has been monitoring the progress of reduction efforts and the status of overtime work, site by site, within the countermeasure working group established across the company. Annual plans for overtime work are formulated, and the head office manager works with site staff to address any discrepancies between actual monthly results and the annual plan. The working group promotes measures such as reducing internal documentation, utilizing the head office's back-office for creating documents, and introducing IT tools to maintain timely communication with the head office and small and medium-sized entrusted business operators. In addition, the company has increased the number of times employees can return home to three times a month to make it easier to spend time with their families during long-term assignments at construction sites and other locations.

● Improving Work Engagement

The company has been conducting an engagement survey annually since FY2022. The results for FY2025 showed an engagement rate of 81%, exceeding the KPI target of 80% and achieving our goal. Furthermore, our performance compares favorably with other companies.

Based on our analysis of the survey results, we have identified three key areas for improving engagement: an environment for growth, feedback/evaluation, and corporate culture. We are focusing on these areas as priority initiatives.

1.Creating an Environment for Growth

In addition to developing training programs that support employees' self-driven and continued growth, we provide long-term career development support through interviews that identify their aspirations for three and ten years into the future. We have also launched a new rotation program for employees to experience multiple fields during their first five years at the company, fostering "ϖ-shaped talent" with diverse expertise. To expand our overseas operations, we are developing overseas project managers and administrative personnel, primarily focusing on younger employees and those without prior overseas experience. We have also begun implementing a talent management system to promote the strategic placement and development of diverse personnel by centrally managing work histories and skill information.

2.Enhancing Feedback and Evaluation

We have introduced feedback (FB) and one-on-one meetings that include evaluation of daily work, promoting greater acceptance of evaluation results. We provide managers with FB and one-on-one training to enhance their skills.

3.Cultural Reforms

Since FY2023, we have been implementing cultural reforms under the motto, "Let's communicate. Let's listen carefully. Let's create together." We have been strengthening information dissemination from management and continuing dialogue with employees through roundtable discussions to convey expectations, hear about employees' work, and listen to their perspectives. In addition, we have been conducting multifaceted feedback and training for department heads and section chiefs to improve their communication and listening skills.

From a personnel and wage system perspective, given the changing composition of its workforce, such as an increase in mid-career hires, the company has revamped its personnel system to improve the acceptability of evaluations and support employee growth. In FY2026, it achieved the full requested base pay increase (16,000 yen, a 6.4% increase) and raised starting salaries, among other measures, as part of its efforts to enhance job satisfaction by providing competitive compensation.

SH Initiatives to Realize a Work-Life Balance (Ease of Working) and Improve Employee Engagement (Job Satisfaction)

As a measure to realize a work-life balance, initiatives have been implemented to reduce work hours and improve work-life balance, such as designating Wednesdays as the day to encourage everyone to leave on time, prohibiting all work after 10 pm, and also designating annual days off. To support more diverse workstyles, JFE Shoji has introduced work-at-home, flexible working hour systems, and a reduced working hour system. It abolished core hours for remote work in April 2026 to maximize work efficiency and results while also supporting work-life balance. To create an environment where employees can work with peace of mind while raising children, in August 2026 it extended the eligibility period for reduced working hours through the child's completion of the sixth grade of elementary school. JFE Shoji will continue to improve the working environment through such initiatives.

The company has also been conducting an annual engagement survey since FY2021, and the results for FY2025 showed an improvement to 79% against the KPI target of 80%, up from 77% in the previous year. To further improve the score through both structural approaches and communication initiatives, it has been reviewing systems such as introducing an internal job posting system to encourage self-directed challenges and revising the personnel system, as well as increasing new communication opportunities such as one-on-one career interviews between supervisors and subordinates and encouraging dialogue between directors and employees. Each department also publishes the engagement scores for the teams to which its employees belong, and the company as a whole is working to improve work engagement (job satisfaction) by, for example, developing individualized action plans based on the results for each department.

In its revised personnel system, the company has reaffirmed the importance of the relationship between supervisors and subordinates throughout the year, from goal setting to feedback on evaluation results, to ensure that individual growth leads to corporate growth. The system encourages supervisors and subordinates to discuss how to develop the employees' careers and plan their work with the future in mind, making their work more rewarding.

Furthermore, in January 2025, it established a Business Process Renewal Team to visualize companywide business processes and process-related issues. Starting in FY2026, the company has been working to improve operational efficiency by fundamentally reviewing its operations under the keywords "decluttering," "review," and "systematization," as the starting point for addressing these issues.

Operational Reforms

ST Promoting Operational Reforms that Leverage the Latest ICT

JFE Steel is advancing business process improvements using low-code development tools to streamline employee tasks and to free up more time for creative work. By FY2025, these improvements had freed up a total of 300,000 hours annually that can be allocated to other productive work. By expanding training on these tools, the company increased the number of citizen developers able to independently develop applications to 1,500.

Furthermore, the company is developing a platform for leveraging generative AI to promote operational efficiency and enhance management decision-making. The number of registered Copilot user licenses reached 3,600 at the end of FY2025 and is projected to expand to 5,600 by the end of FY2026, indicating the widespread use by individuals. Development of AI agents is also gaining momentum, with development and implementation currently underway for more than 50 cases, including capital expenditure decisions and product inquiry reviews by the sales department.

EN Promoting Operational Reforms Using Generative AI

In September 2023, with the goal of innovating business operations through the use of generative AI, JFE Engineering released Pla'cello xChat, the company's AI text generator that helps minimize the risk of information leaks through unique security measures, for internal use. We are striving through training sessions and hands-on workshops to promote the wider use of generative AI, and more than 2,800 employees are already leveraging Pla'cello xChat to boost work efficiency in creating documents, organizing information, and for other tasks.

The company uses generative AI for both general office operations and tasks unique to the construction industry. It has developed technologies such as chatbots, document search, and AI-OCR and is rolling out dedicated applications. By automating simple, labor-intensive processes like transcribing and converting data within documents, it is reducing workloads and improving efficiency.

By introducing various programs, measures and tools to boost efficiency, we aim to achieve both work-life-balance and improved productivity while maximizing overall output.

SH J-MUSCLE Activities

JFE Shoji is working as a group to implement operational improvement (J-MUSCLE) activities aimed at increasing work efficiency and performance.

The company is pursuing activities to review and transform the very way it conducts its daily work, such as streamlining information gathering, market analysis, and document creation through the use of generative AI; visualizing data; and digitizing and standardizing operations. Through these efforts, it aims to review business processes, identify necessary tasks, eliminate waste, and use the time saved to create new added value. In addition to addressing the challenges of each activity team, the company is also tackling companywide issues across organizational functions, thereby expanding the scope of its efforts.

At the 2025 J-MUSCLE presentation, 22 teams from JFE Shoji and domestic and overseas group companies presented their J-MUSCLE activities online, attracting a cumulative audience of 3,450 across the Group. By sharing these activity results, the company is promoting best practices Groupwide to drive further operational reforms.

JFE Shoji will continue to foster a corporate culture that can flexibly adapt to the changing times and constantly seek challenge and change free of preconceived notions.

Invigorating Workplaces through Small Group Activities

ST J1 Activities

At JFE Steel, approximately 1,100 small groups carry out J1 Activities* that have yielded various results in the key areas of quality and work improvement. In addition, the JFE Family Result Reporting Conference, which includes participation from Group companies, is held twice a year, and groups that excelled in the competition are dispatched to QC Conventions and affiliated companies in Japan and overseas to strengthen the J1 Activities.

*Designed to turn JFE into an excellent company and propel it to the number one position in its industry (called JE1 Activities at JFE Engineering and J1 Activities at JFE Steel and JFE Shoji).

EN Initiatives of JE1 Activities

JFE Engineering has about 260 teams and 2,000 employees, including those of group companies worldwide, involved in JE1 Activities. The results of these activities are showcased at a companywide competition held at the end of the fiscal year. Activities focused on topics such as quality, efficiency, safety, and costs contribute significantly to workplace vitality and corporate performance.

SH Further Revitalizing J1 Activities

JFE Shoji has been conducting J1 Activities in production divisions of its group companies in Japan as a means of improving their problem-solving skills in areas such as safety, quality, cost, operations, and delivery target. The company holds annual competitions in which about 20 teams report their activity results, and awards are given to the best-performing teams in safety, quality, and operations. By holding the presentation meeting via Teams, more than 100 people were able to participate. The company will continue to promote J1 Activities to improve workplace vitality and enhance problem-solving skills.

Toward Sound Labor-Management Relations

The JFE Group engages in active discussions with the labor union regarding working conditions and various programs in order to foster a vibrant workplace. We take the union's opinions as representing the true perspectives of our frontline employees, and we also identify issues and explore measures to create motivating work environments.

ST Sincere Labor-Management Consultations

Recognizing that labor-management cooperation is essential for the company to fully tackle its business challenges, JFE Steel has established a strong relationship with its labor union based on understanding and trust. The company convenes its Labor-Management Business Discussion Committee four times a year to bring the president and other executives together with labor representatives for the purpose of exchanging ideas on business challenges. In addition, labor and management are holding joint committees on work-life balance and improving work engagement. The two sides also exchange views on working conditions, workplace environments, and other related matters, and hold joint consultations whenever the labor system is amended.

EN Working toward Sound Labor-Management Relations

JFE Engineering strives to ensure sound labor-management relations. Central Labor-management Committees are regularly convened for the company's president and other executives to share views with representatives of its labor union. With regard to working conditions, they exchange views through the labor-management committee. The company has established a system for both labor and management to share challenges and perspectives while conducting appropriate discussions.

SH Maintaining Sound Labor-Management Relations

JFE Shoji management and labor have jointly declared they will achieve continuous growth for the company, enhancing the lives of employees and realizing an affluent society based on mutual trust and understanding. The company maintains a sound relationship between management and labor. Semiannual Management Committee meetings are held as opportunities for the company president and other executives to regularly exchange opinions and share management information with representatives of the labor union.

Occupational Health and Safety

Initiatives

To ensure safety at its operating companies, safety initiatives by each operating company are discussed in their respective meetings and the overall status of groupwide initiatives and activity policies are discussed at the Group Sustainability Council (chaired by the President of JFE Holdings). The JFE Group regularly reports to the Board of Directors, which provides direction and supervision. Each operating company also holds discussions on health and safety with the labor unions through the Occupational Health and Safety Committee.

Under the Eighth Medium-term Business Plan, we are working to establish workplace conditions in which everyone at Group and partner companies (including contractors) can work safely. In addition to instilling a strong personal and organizational awareness of safety, the operating companies will continue investing in safety at the same scale as the Seventh Medium-term Business Plan (approximately 10 billion yen per year), advancing the complete separation of moving equipment and personnel through facility modifications, and further promoting multifaceted health and safety management, such as monitoring and detection, using DX.

The JFE Group organizes training programs for newly appointed managers and supervisors to provide information on the Industrial Safety and Health Act and risk assessment methods and on formulating work plans and policies for health and safety management. In the construction department, we offer programs for local superintendents in charge of construction work (Overall Safety and Health Controller) centered on the Industrial Safety and Health Act as well as related SME Transactions Act and the Construction Business Act (471 participants in 2025). We also conduct new employee training and position-specific training on mental health (1,627 participants in 2025).

› **Sustainability Management** (P. 10)

For data related to lost-work injuries at each company, please refer to:
› **Social Data: Lost-Work Injuries and Accidents** (P. 288)

ST Occupational Health and Safety Initiatives Based on the Health and Safety Activity Policy

JFE Steel is implementing initiatives in line with its health and safety activity policy for 2026. On the safety front, we are promoting independent, self-directed safety activities to ensure compliance with rules and create accident-free workplaces. On the health front, we are promoting activities based on the Health Declaration to increase the number of employees who can work in good physical and mental health over the long term. In accordance with our goal of achieving zero fatal and serious accidents companywide and zero accidents at each workplace, we are implementing the following activities.

For safety, we are striving to develop safety-conscious employees and workplaces by promoting compliance with rules, conducting activities to prevent recurrence of similar accidents, and engaging in open dialogue with frontline workers to identify and address risks. To create accident-free workplaces, we use risk assessments to evaluate and reduce accident risks. By using risk assessment in advance to evaluate risks during the planning stage of new equipment installation and during regular and irregular equipment maintenance, we are preventing accidents and mitigating risks. We are also striving to ensure the intrinsic safety of equipment and operations by proactively budgeting to improve workplace issues (safety investments), introducing machinery safety standards, and applying DX technologies, thereby reducing the level of worker risks.

For health, we are pursuing health initiatives based on the Steel Health and Productivity Management Strategy Tree, developed in response to the JFE Group's Health Declaration.

In order to more independently and systematically promote occupational health and safety management throughout the organization, we established an occupational health and safety management system in accordance with the ISO 45001 international standard and obtained ISO 45001 certification (JIS Q 45001) for all our construction and operating sites. We will continue making workplaces safer and healthier through an ongoing and effective operation of the occupational health and safety management system.

Certified Sites

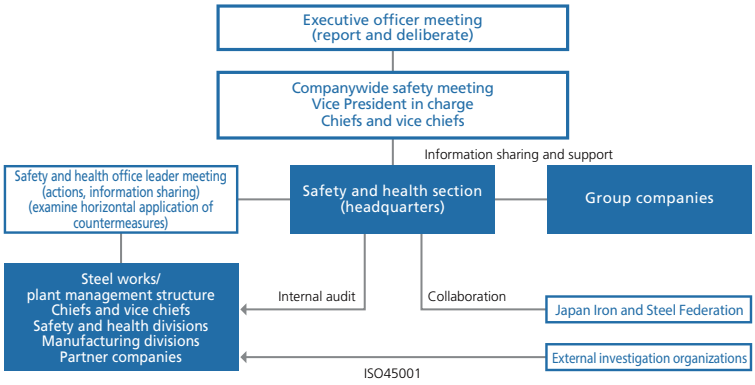
- Chita Works (certified on September 9, 2021 ➡ renewed on September 9, 2024)
- Fukuyama Area (certified on December 16, 2021 ➡ renewed on December 16, 2024)
- Kurashiki Area (certified on May 26, 2022 ➡ renewed on May 26, 2025)
- Chiba Area (certified on May 26, 2022 ➡ renewed on May 26, 2025)
- Sendai Works (certified on December 15, 2022 ➡ renewed on December 15, 2025)
- Keihin Area (certified on January 19, 2023 ➡ renewed on January 19, 2026)

› **Social Data: Occupational Health and Safety (Percentage of Sites Certified under ISO 45001)** (P. 290)

In the event of an industrial accident, the department in which the incident occurred investigates the cause and formulates and implements actions to prevent recurrence. At the same time, we inform the relevant departments and labor union through the Occupational Safety and Health Committee. We will also set up a disaster investigation committee as necessary and forward recommendations to the department where the accident occurred as well as related departments so that they can develop appropriate measures to prevent recurrence. In the event of fatal and serious accidents, a response is deployed across the company, and a standard progress report is submitted to Corporate Officer Council until countermeasures have been completed. In the event of other incidents and near-misses, the health and safety departments discuss and determine the need to deploy a companywide response and follow up on progress until the companywide deployment is completed. This practice has been standardized across the entire company.

We immediately report industrial accidents to the Japan Iron and Steel Federation (JISF) under the required guidelines. We file an update once we have determined the cause and decide on countermeasures. In the event of fatal accidents, we promptly submit a report on safety, disaster prevention, and environmental issues to the Ministry of Economy, Trade and Industry and the JISF.

Management Structure for Health and Safety

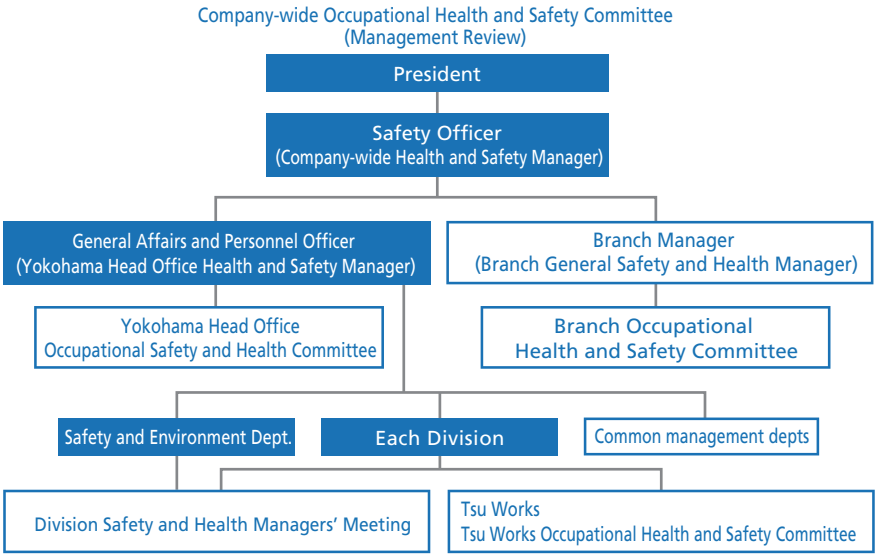


EN Ensuring Employee Health and Improving Occupational Health Level

In addition to setting up governance organizations for health and safety at each operating site to comply with the Industrial Safety and Health Act and in line with the type of work and number of employees, JFE Engineering has established a governance structure for health and safety at each operational headquarters to facilitate and effectively implement companywide management at its construction and operating sites and manufacturing plants. JFE Engineering strives to eliminate disasters at all suppliers and group companies by establishing priority items to be shared across the company and to which all employees and all staff at suppliers adhere. It also endeavors to identify sources of danger as well as safety measures through risk assessments aligned with the particular characteristics of each individual operational headquarters. Meanwhile, it promotes physical and mental health and the creation of comfortable working environments as a means of ensuring the health of employees and bringing occupational health to an overall higher level.

In the event that an industrial accident occurs, occupational health and safety managers will meet to determine the cause and consider countermeasures that will be deployed across the company. The company has been operating an occupational health and safety management system (ISO 45001 certified at each location and department) for its construction activities in Japan and overseas as well as its manufacturing operations at works. As a new initiative, JFE Engineering applies IT solutions promoting occupational health and safety, including monitoring and detection using multiple approaches.

Management Structure for Health and Safety



SH Enhanced Health and Safety Activities and Establishing a Safe and Secure Working Environment

JFE Shoji is implementing the following measures to eliminate unsafe operations that could lead to fatal or serious accidents, with the aim of achieving zero such accidents at its coil centers and other processing sites.

1. Risk assessment by supervisors patrolling the site and identifying unsafe operations using the recording functions of safety cameras, or by ensuring that each worker is engaged in hazard prediction
2. Comparative study of similar disaster cases and hazard experience training for improving the ability to recognize and avoid unsafe operations
3. Facility improvement for reducing risks, including installation of safety sensors
4. Operation training (slinging for cranes and other skills) and review of operational standards

Furthermore, for each of its group companies, JFE Shoji assigns a safety manager to spearhead these efforts to raise the level of health and safety activities. To ensure that all JFE Shoji Group companies operate under the same values, safety managers meet every other month to share knowledge and information on occupational health and safety.

Annual safety awards are also presented to encourage employees to actively engage in health and safety activities. Through these initiatives, the company will raise the level of safety management within the JFE Shoji Group and continue to maintain safe working environments.

Intrinsic Safety through DX

ST Designing Lines that Protect Workers Even When They Enter Accidentally

As part of our safety objectives in 2026 to create accident-free workplaces, we are promoting the use of DX technologies to ensure safety even when someone mistakenly enters a hazardous area. For example, we have introduced person-detection systems where it is impractical to install physical barriers separating internal production line operations from external areas, creating a risk of inadvertently venturing into danger zones. These systems detect someone entering into a hazardous area and can prevent accidents by either immediately interrupting equipment operation or preventing idle equipment from starting. Another example is the introduction of a safety monitoring system that links smartphones with portable gas monitors to detect concentrations of oxygen, carbon monoxide, combustible gases, and hydrogen sulfide, and determine the safety and suitability of working under those conditions. We also use smartphone GPS functions to detect the positions of heavy machinery and other equipment to further safeguard worksite safety. This information is immediately communicated to workers, and recorded location data is used in facility improvements.

Going forward, we will continue introducing DX technologies.

EN Intrinsic Safety at Construction Sites through DX

JFE Engineering is implementing innovative efforts that leverage digital technologies to fundamentally enhance construction site safety.

Three-dimensional simulation technology is used during construction planning to visualize the movements of cranes and structures in advance in order to identify and prevent potential interference risks with high-voltage power lines and surrounding structures before work begins. The technology also optimizes the placement of heavy machinery and material storage areas, as well as worker traffic flow, allowing everyone involved in the project to share a clear overview of the construction process and significantly reducing unnecessary work and errors.

The introduction of inspection robots and drones equipped with 3D measurement technology allows inspections of elevated structures such as viaducts and dimensional surveys of silos that previously required working at height to be performed safely from the ground or other secure locations.

When installing equipment in confined spaces, such as inside buildings, equipment was traditionally lifted and pulled horizontally using suspension hooks and winches. However, we have adopted an installation method using construction robots that minimizes human involvement in hazardous tasks.

This strategic use of digital technologies not only enhances worksite safety but also leads directly to greater efficiency and reduced costs, thereby contributing to sustainable growth in corporate value.

Health and Productivity Management

Companywide Targets for Each Operating Company

We collaborate with the health insurance association and occupational health staff to maintain and improve employee health. Under the Eighth Medium-term Business Plan, we have set a top-level goal of increasing the number of employees who are physically and mentally healthy and able to perform at a high level, thereby reducing presenteeism. To this end, we are systematically implementing improvement initiatives, such as support for early detection and continued medical treatment as well as smoking cessation and sleep improvement programs.

Presenteeism Performance Results

	Category	FY2025 Target	FY2025 Results	FY2026 Target
JFE Steel	Percentage of employees who are physically and mentally healthy and working at 80% or higher performance (percentage of employees with presenteeism of 20% or less*) *Measurement method: SPQ University of Tokyo 1-item version	67% or above	68.0%	67% or above
JFE Engineering		67% or above	64.6%	67% or above
JFE Shoji		67% or above	72.2%	67% or above

Specific Operating Company Targets and Results

	Category	Item	FY2025 Target	FY2025 Results	FY2026 Target
JFE Steel	Support for early detection and continued treatment	Regular health checkup attendance rate	100%	96.9%	100%
		Dependent health checkup attendance rate	60% or higher	57.1%*	60% or higher
	Support for maintaining appropriate body weight	Obesity rate (BMI 25 or higher)	30% or lower	32.5%	30% or lower
	Promotion of smoking cessation support	Smoking rate	Annual reduction of 1.5%	23.1%	Annual reduction of 1.5%
	Stress check	Stress check implementation rate	98.0% or higher	97.0%	98.0% or higher
JFE Engineering	Sleep measures	Sleep risk (based on responses in health checkup questionnaire)	35%	43.1%	42% or lower
	Measures to prevent secondhand smoke exposure	Smoking rate	20.9%	21.3%	Annual reduction of 0.5%
	Obesity remediation	Obesity rate (BMI 25 or higher, or waist circumference ≥85 cm for men, ≥90 cm for women)	38.3%	41.1%	Annual reduction of 1.0%
JFE Shoji	Support for early detection and continued treatment	Regular health checkup attendance rate	100%	100%	100%
		Re-examination attendance rate	65%	69.4%	70%
	Sleep measures	Sleep risk (based on responses in health checkup questionnaire)	35%	39%	35%
	Stress check	Stress check implementation rate	97.6%	98%	98% or higher

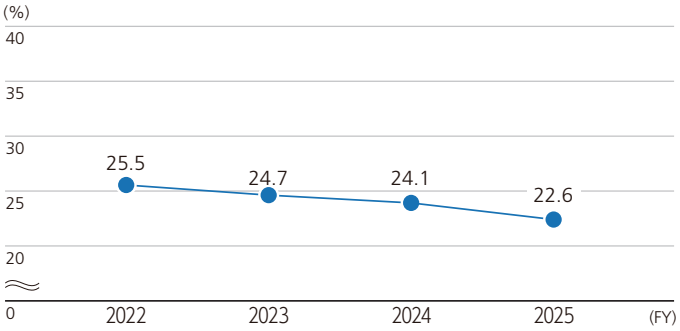
*Preliminary figure

Note: At JFE Steel, the attendance rate for regular health checkups and the obesity and smoking rates are managed on a calendar-year basis.

Physical Health Initiatives

- Ensure the implementation of regular physical examinations and strengthen cancer screenings.
- Prevent aggravation of lifestyle diseases by conducting metabolic syndrome checkups and offering health guidance.
- Utilize the health insurance union's health promotion app, PepUp, to educate employees on physical exercise and other healthy habits.
- Promote non-smoking areas and maintain separate areas for smokers and non-smokers in buildings. Provide guidance to help employees quit smoking through industrial physicians and public health nurses.

Changes in Smoking Rates (All Operating Companies)



Mental Healthcare

The JFE Group conducts four basic initiatives to maintain the mental health of employees: self-care for workers who strive to remain aware of stress and take preventive measures; care by management supervisors who provide advice to subordinates; care by industrial health staff who support employees, managers and supervisors; and care by human resources outside workplaces, including specialist clinics and individuals.

JFE's health insurance union also provides mental health counseling and a 24-hour hotline for employees and their families (spouse and dependents).

Initiatives on Health Issues

We operate a health management system for continuously and effectively managing the health of all employees, including those on overseas assignments and business trips and those studying abroad.

We particularly seek to ensure that employees working abroad, under healthcare systems that differ from those in Japan, can maintain a healthy lifestyle, along with their accompanying family members, by conducting health checkups and vaccinations before they move overseas, in accordance with Companywide regulations. In a proactive effort to prevent infections, we also provide information on global health issues such as COVID-19, HIV, tuberculosis, and malaria during assignment briefings. We will continue to monitor and appropriately respond to global health issues.

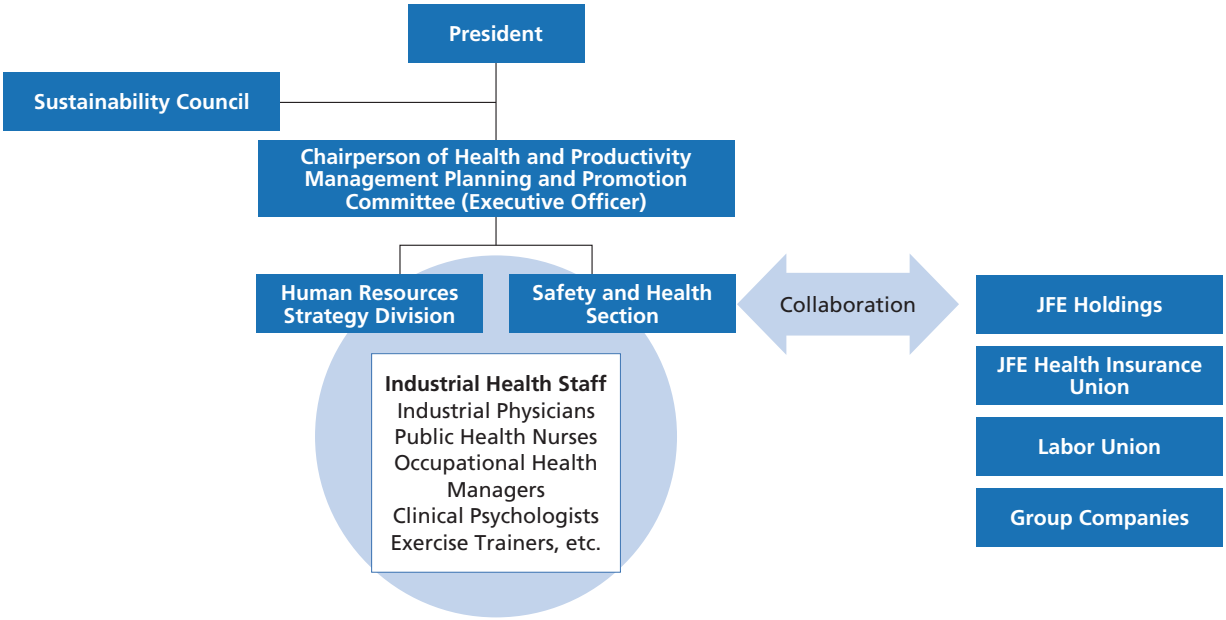
ST Promoting Health and Productivity Management to Maintain and Improve Health

To maintain and improve the health of employees and their families, the JFE Group established the Group Health Declaration in 2016. In line with the declaration, JFE Steel launched the Health and Productivity Management Promotion WG and has been setting medium- to long-term companywide goals. We hope these activities will enable all employees to work healthily and vigorously, and we plan to establish a health culture in which every employee practices activities on their own initiative to maintain and improve their health.

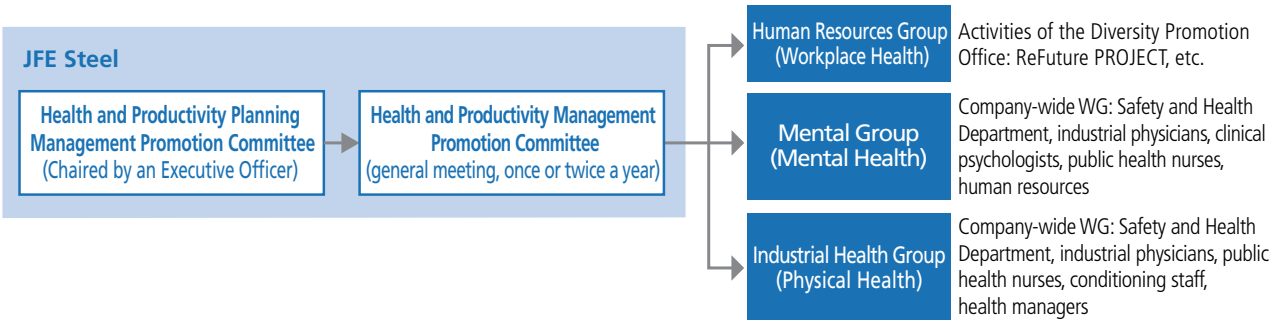
In 2016, JFE Steel first focused on physical health and established key initiatives regarding: (1) thorough implementation and reinforcement of physical examinations, (2) preventive health measures, (3) establishment of sound exercise and health habits, and (4) non-smoking and segregated smoking activities. In 2024, the company expanded the scope to include mental health, and it has been promoting health and productivity management at all of its operating sites.

In 2025, it set a top-level goal of increasing the number of employees who can work in good physical and mental health over the long term. To this end, we created a Health and Productivity Management Strategy Tree that organizes specific actions for attaining this goal. Since 2025, we have been promoting health management across all of our operating sites.

Health and Productivity Management Promotion System



Structure of Health and Productivity Management Promotion WG



Objective of the Health and Productivity Management Promotion WG

Realization of the JFE Group Health Declaration
To enable all employees to work in good health and vigor
To establish a health culture in which each and every employee practices activities at their own initiative to maintain and improve their health

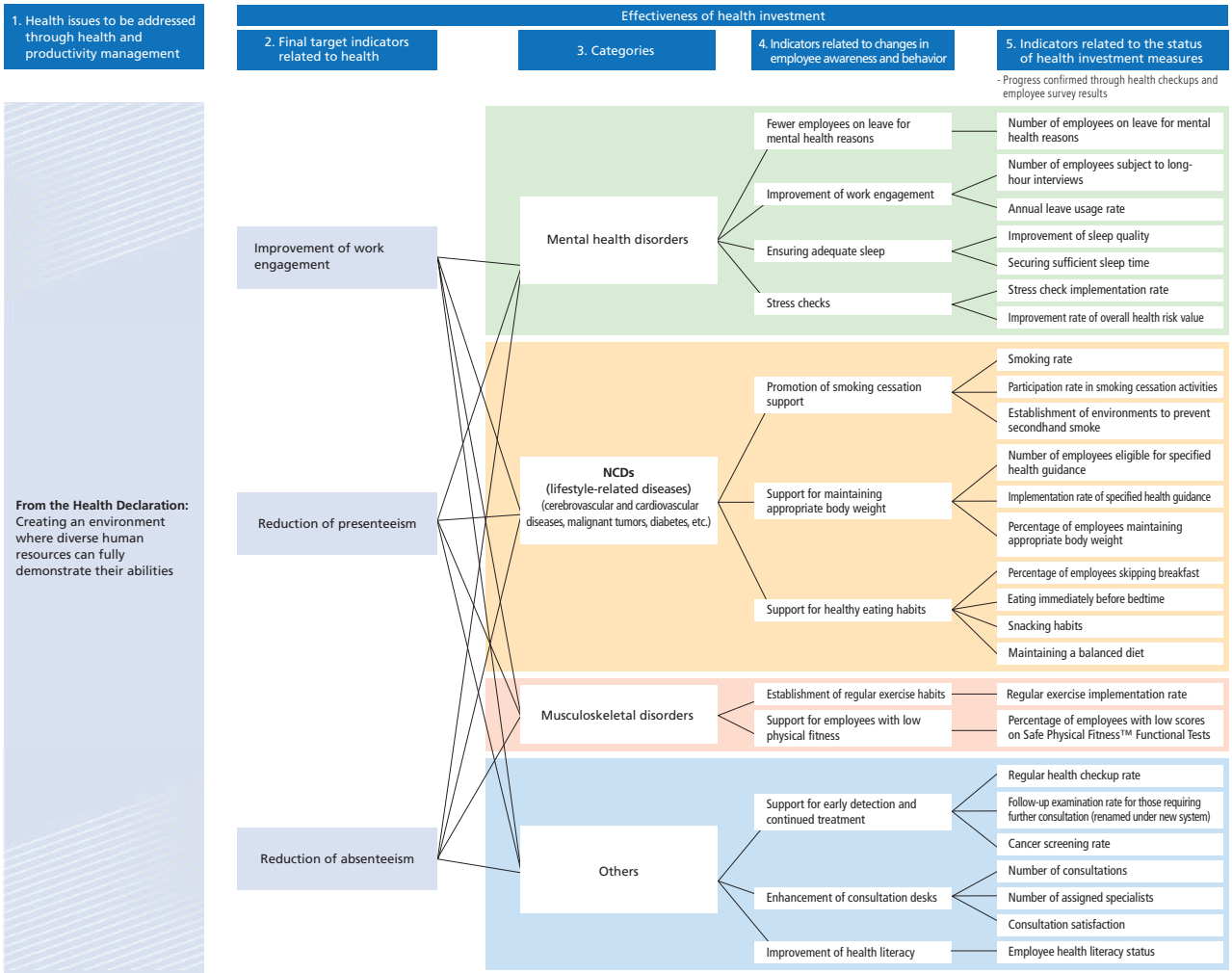
Work Environment Health
- Workstyle reform
- Promotion of women's participation and advancement in the workplace
- Promote diversity

Mental Health
- Stress check WG
- Expand mental health counseling services
- Expand steel mill compliance training

Physical Health
- Health and Productivity Management Promotion WG

Main Themes:
1. Thorough implementation and reinforcement of physical examinations
2. Preventive health measures
3. Establishment of exercise and health promotion habits
4. Promotion of non-smoking and segregated smoking activities

Health and Productivity Management Strategy Tree



ST Health Management through Safe Physical Fitness™ and Promotion of Smoking Cessation

JFE Steel defined the physical fitness necessary to work safely, for a long time, and with vitality as Safe Physical Fitness™ in 2004, and it has been offering the Active Exercise™ program, designed by West Japan Works, and Safe Physical Fitness™ Functional Tests, throughout the entire company, to help people prevent a decline in physical strength and injuries from falling. The program's effectiveness in preventing occupational accidents and improving health has even attracted attention outside the company, and through participation in the Ministry of Health, Labor and Welfare's SAFE Consortium, initiatives such as Active Exercise™ and Safe Physical Fitness™ Functional Tests are being promoted not only among on-site partner companies but also among businesses in other industries. In addition, the Safe Physical Fitness™ initiative was recognized and received the FY2025 Chairperson's Award of the National Conference on Physical Fitness from the Japan Sports Agency.

The Extinguishing Smoking Cessation Program, an initiative designed to help employees take their first step to quit smoking, received the top prize in the QC Circle Headquarters Director's Awards at the 3rd Administrative, Sales, and Service Divisions QC Circle Grand Championship, Small Group Improvement Activities.

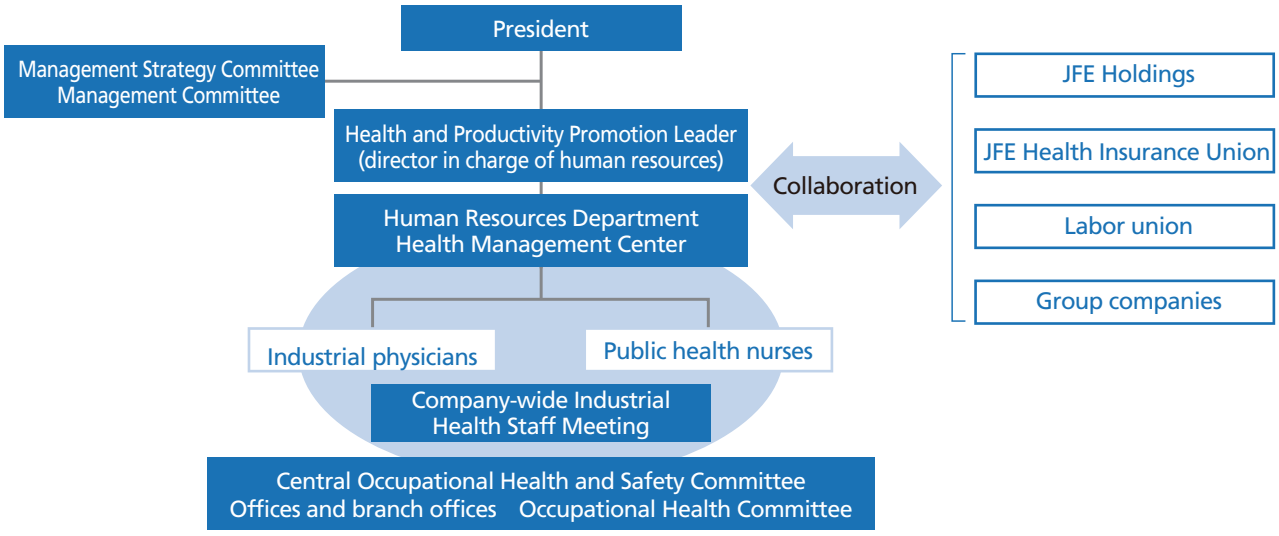
EN Engineering Activities for Boosting Health Based on Health Checkup Data

JFE Engineering maintains a system centered on the Health Management Center of the Human Resources Department, under which industrial health staff at each office and branch office cooperate to promote activities. The company is pursuing initiatives for improving health focused on five domains, including sleep, smoking, and obesity issues extracted from past health checkup data, along with cancer and mental health. Every year, the Health Management Center compiles basic health checkup data and prepares the Data Book, which shows changes over time at a glance for the entire Company and major business sites. The center follows the PDCA cycle while reviewing the results of its initiatives.

In FY2024, JFE Engineering established the JFE Wellness Action 5, a set of five clear and practical health behavior guidelines designed to be easily understood and implemented by employees.

To provide opportunities for employees and their families to think about their health, the company has designated the last week of every May as Health Management Week, during which it holds occupational health seminars and other events while offering healthy menus in the employee cafeteria.

Health and Productivity Management Promotion System



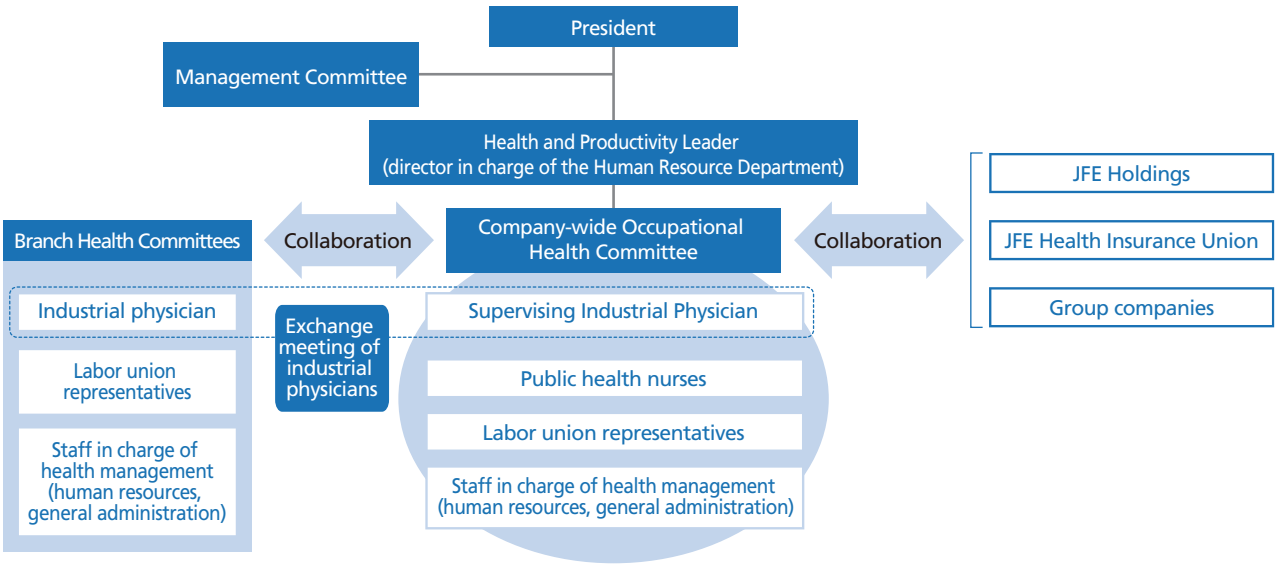
Initiatives Based on Past Health Checkup Data

Fiscal Year Launched	Purpose	Initiatives
2018	Preventing cancer	Stomach endoscopy during regular health checkups
2019	Improving sleep habits	Companywide self-care seminars to practice napping and breathing exercises
2020	Addressing obesity	Labor and management co-sponsored RIZAP seminars and workplace exercises at home
2021	Ending exposure to passive smoking	Complete ban on indoor smoking
	Improving sleep habits	Companywide rollout of Self-care Seminar II focused on sleep-wake rhythms
2022	Providing more personalized guidance	Provision of more individualized guidance on sleep, obesity, smoking, etc.
2023	Preventing cancer	Colonoscopy subsidy system introduced, charity walk held
2024	Improving sleep habits	Conducted SAS screening, held charity walk, established JFE Wellness Action 5
2025	Obesity remediation	Held headquarters-versus-headquarters walking competition and InBody measurement events

SH Detecting Illnesses at an Early Stage, Maintaining and Promoting Health for Employees and Their Families

JFE Shoji believes that the health of employees and their families holds the key to the further development of the company. It is therefore working to maintain and improve their health and create workplace environments in which employees can work with vigor. For example, the company has held a Health Month since FY2025 to raise awareness of health. During that time, it analyzes trends in the company's health checkup results and shares the findings with all employees. It also holds sleep seminars and releases videos on women's health to encourage self-care.

Health and Productivity Management Promotion System



Past Initiatives

Fiscal Year Launched	Purpose	Initiatives
2018	Prevent cancer	Helicobacter pylori tests conducted during regular health checkups
		New program for subsidizing examination fees for breast cancer and uterine cancer
	Raise employee health awareness	e-learning program based on the importance of regular health checkups, and reducing heart and brain disease
2019	Prevent lung cancer and stroke	Measures related to passive smoke (reduction in smoking rate)
	New program for subsidizing smoking cessation clinic fees	
2020	Encouraging employees to exercise as a habit	Encourage participation in the Powering Up Health Care program
2022	Providing more individualized guidance	Encourage individual consultation to those eligible for specific health guidance
2023	Early detection of stomach cancer	Gastrointestinal endoscopy tests conducted during regular health checkups
2024	Strengthening the implementation of specific health guidance	Enhanced collaboration with health insurance associations and medical institutions to thoroughly encourage participation
	Raising health awareness	Held women's health seminars
2025	Health Month	Held sleep seminars Shared women's health videos Published health checkup analysis results

Human Rights

Basic Policy

The JFE Group views respect for human rights as both a corporate social responsibility and a foundation of its business. Our determination to prevent discrimination in our business operations is clearly expressed in our Standards of Business Conduct, which we have consistently upheld. The JFE Group Human Rights Basic Policy, established as a standard with which Group companies and their officers and employees must comply, was revised in April 2023, and each operating company has reviewed and revised its procurement guidelines and related materials in line with this policy. Under the policy, we also seek cooperation from all stakeholders, including our supply chain, to respect and protect human rights.

We have been conducting human rights due diligence since FY2021 in accordance with the United Nations Guiding Principles on Business and Human Rights, while organizing seminars by external experts on human rights.

We will continue to promote initiatives for realizing a society in which human rights are respected and protected.

JFE Group Basic Policy on Human Rights

JFE hereby establishes the JFE Group's Basic Policy on Human Rights based on the United Nations Guiding Principles on Business and Human Rights in order to promote Group-wide efforts to respect human rights and to fulfill its responsibilities to all stakeholders that it influences in the course of its business activities.

1. Basic approach to respect for human rights

We, the JFE Group, support and respect the International Bill of Human Rights, which consists of the Universal Declaration of Human Rights and the International Covenants on Human Rights, as well as the International Labor Organization (ILO) Declaration on Fundamental Principles and Rights at Work.

We believe that respect for human rights is a corporate social responsibility and a foundational aspect of our operations. In addition to clearly stating and implementing our policy for respecting all members of the company and the general public and refraining from any form of discrimination in our corporate activities, we implement initiatives to ensure that we are not complicit in human rights abuses.

This policy represents our commitment to respect human rights based on the JFE Group Standards of Conduct.

2. Scope of application

This policy applies to all officers and employees of the JFE group. We also encourage all stakeholders, including members of our supply chain, to understand and support this policy.

3. Compliance with applicable laws

We comply with the laws and regulations of Japan and all other countries and regions where we operate, but if there is any conflict with internationally recognized human rights and regulations, we seek ways to respect internationally recognized human rights as much as possible.

4. Human rights due diligence

We identify negative impacts on human rights and utilize our internal mechanisms for human rights due diligence to prevent or mitigate such impacts.

5. Corrections and remedies

We maintain reporting contact points for receiving reports from both internal and external sources regarding negative impacts on human rights caused by any of our business activities. If we are made aware that we have caused or been involved in a negative impact on human rights, we will follow the necessary procedures to correct and remedy the problem.

6. Education

We provide education on respecting human rights to ensure that all of our officers and employees understand and implement the company's basic policy.

7. Oversight

The JFE Group Sustainability Council, chaired by the President of JFE Holdings, Inc., oversees compliance with this policy and the implementation status of initiatives referred to herein.

8. Dialogue and consultations with stakeholders

Among the initiatives taken under this policy, we utilize outside experts as well as engage in discussion and consultation with internal and external stakeholders.

9. Information disclosure

We appropriately disclose all relevant information about our initiatives concerning respect for human rights and the progress of such initiatives via JFE group websites and other means.

10. Business-related human rights issues

(1) Non-discrimination and equality under the law

We respect every individual connected with our corporate and business activities and do not discriminate on the basis of race, nationality, ethnicity, creed, religion, social status, lineage, age, gender, sexual orientation, gender identity, disability, or any other such factor.

(2) Engaging with business partners

We seek the cooperation of all of our business partners in initiatives to respect and protect human rights in order to contribute toward creating a society in which the rights of all humans are respected and protected.

(3) Harassment

We do not engage in any kind of harassment based on gender, status, or any other factors, including through language or behavior that offends or violates the dignity of others.

(4) Forced labor and child labor

We never use forced labor or child labor in any country or region. We also do not tolerate or sanction any form of modern slavery, including bonded labor and human trafficking.

(5) Occupational health & safety and appropriate working environments

In accordance with the fundamental idea that safety is our top priority above all else, we pursue health and safety in all of our activities and strive to create safe, healthy workplaces where all employees feel assured that their physical and mental health is protected.

(6) Working hours and livable wages

We comply with all laws and regulations concerning working hours and wages applicable in the countries and regions where we operate. We work to ensure wages that allow employees to enjoy an adequate standard of living.

(7) Right to freedom of association and collective bargaining

We respect employee rights to freely associate and collectively bargain in accordance with the laws and collective bargaining agreements in each country. In addition to taking into account each country's laws and labor practices, we work to build sound labor-management relations and resolve problems by engaging in sincere and constructive dialogue with employees in accordance with international norms.

(8) Rights of local and indigenous peoples

We respect and give due consideration to local people's land rights, access to water, safety and health as well as the rights of indigenous peoples in regions where we operate.

Established: April 2018
Revised: April 2023
JFE Holdings, Inc.

This policy revision was formulated with the assistance of human rights experts and approved at the JFE Group Sustainability Council chaired by the President of JFE Holdings, Inc. Amendments to the policy have also been reported to the Board of Directors.

Structure

Promoting Human Rights

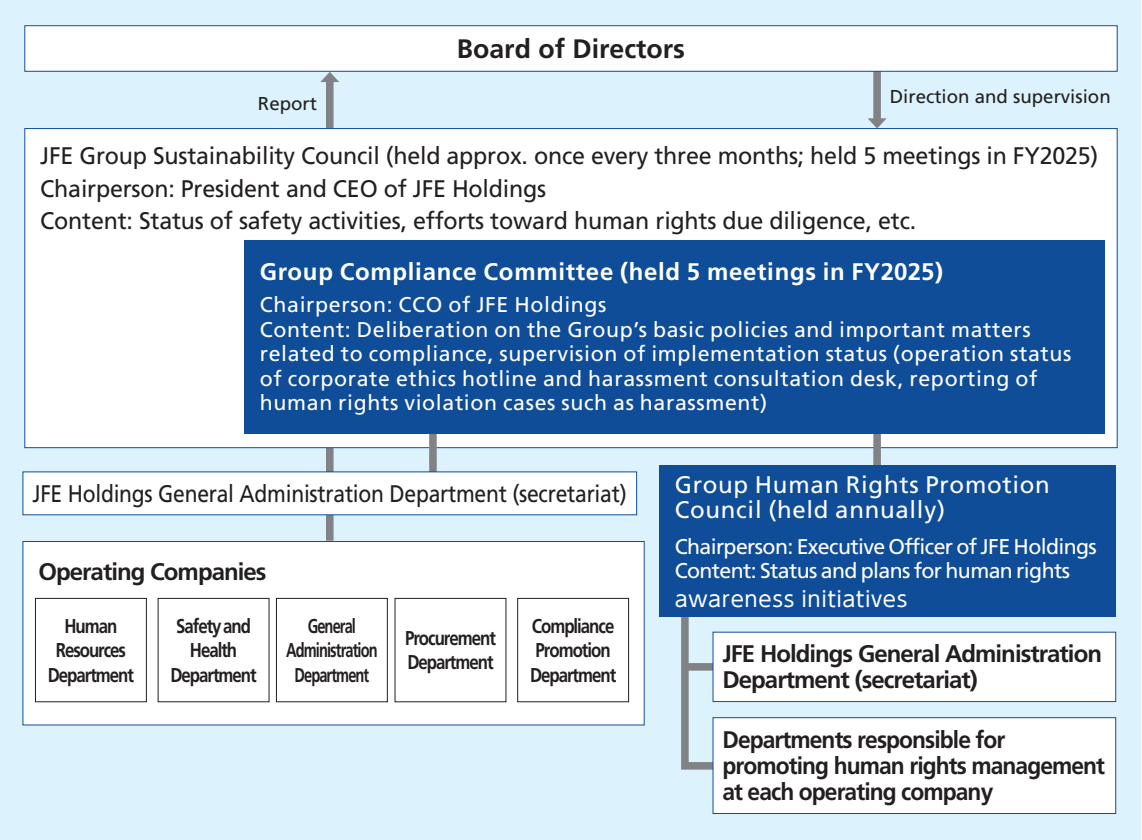
In order to steadfastly focus on human rights initiatives, we formulate Groupwide policies at the JFE Group Sustainability Council, chaired by the President and CEO of JFE Holdings, and report periodically to the Board of Directors for guidance and supervision.

The human rights risks identified as particularly high and requiring action (occupational health and safety, harassment and abuse, and thorough supplier management (establishment of a human rights risk management system for the entire supply chain)) are discussed annually at the Sustainability Council and reported to the Board of Directors, which oversees our efforts to respect human rights and prevent and mitigate human rights risks.

The Human Resources Department and Safety and Health Department of each operating company allocate resources to address human rights risks related to each company's own employees on a daily basis, while the General Administration Department and Procurement Department direct resources to address human rights risks related to suppliers.

In addition, we established the JFE Group Human Rights Promotion Council, chaired by a corporate officer of JFE Holdings, under the Group Compliance Committee, which is chaired by the CCO of JFE Holdings. The council exchanges information annually with the departments responsible for promoting human rights awareness at each operating company.

Governance Structure for Human Rights Awareness Promotion



Grievance Mechanisms

We have been a full member of the Japan Center for Engagement and Remedy on Business and Human Rights (JaCER) since April 2025. The Company accepts reports, complaints, and consultations on human rights issues from stakeholders across the supply chain, 24 hours a day, 365 days a year, in multiple languages and through JaCER's non-judicial Engagement and Remedy Platform, which complies with the UN Guiding Principles on Business and Human Rights. Using this third-party contact point ensures fairness and transparency while addressing essential human rights issues and also safeguarding anonymity and confidentiality. Three reports were filed with JaCER in FY2025, one of which was deemed unrelated to human rights. Cases received are reported to management and the Sustainability Council, promptly and properly investigated, and followed up through dialogue with rights holders based on the specific circumstances of each case.

In addressing all human rights risks, we emphasize communicating with stakeholders through such initiatives as setting up a Corporate Ethics Hotline at each operating company and an independent law firm as an external contact point, as well as dedicated consultation desks on harassment issues at major offices, all of which accept anonymous reporting and consultation on human rights and related issues. In FY2025, a total of 305 cases were handled through the Corporate Ethics Hotline and harassment consultation desks. Out of these, 81 cases were confirmed as harassment, and corrective or other appropriate actions were taken in all of them. These figures cover contact points at JFE Holdings, operating companies, and Group companies.

The operational status of these help desks and reports of harassment, as well as other human rights violations, are regularly reported to the JFE Group Sustainability Council, including progress of investigations, findings, corrective measures, and recurrence prevention initiatives. Reports are also annually submitted to the Board of Directors for guidance and supervision.

› **JaCER Grievance Form** (https://jacer-bhr.org/en/application/form.html)
› **Development of the Whistleblowing System** (P. 265)
› **Governance Data: Corporate Ethics Hotline and Harassment Consultation Desks** (P. 296)

Targets and Results

Recognizing that contributing to the realization of a society in which the human rights of each and every individual are respected and protected is not only a corporate social responsibility but also a foundational principle of management, the JFE Group upholds respect for the human rights of everyone involved in the business as a key management issue and promotes its efforts by setting KPIs.

› **FY2025 KPI Results and FY2026 KPIs** (P. 19)

Human Rights Due Diligence

The JFE Group has been committed to human rights due diligence based on the United Nations Guiding Principles on Business and Human Rights since FY2021.

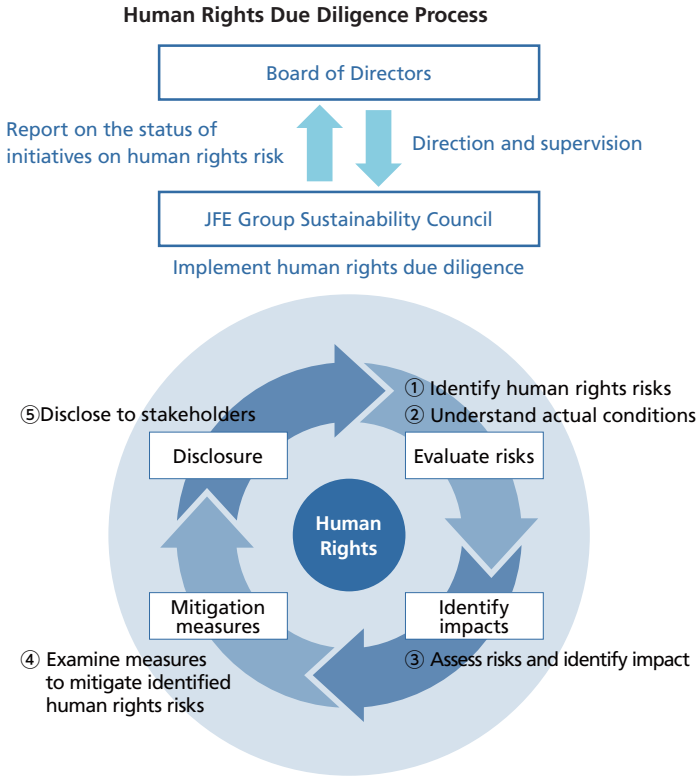
Group's Past Initiatives and Future Plans

A first-round survey　A second-round survey

		FY2021	FY2022	FY2023	FY2024	FY2025	FY2026
JFE Holdings and Operating Companies	**Formulating policies, etc.**						
	JFE Holdings and Operating Companies	Started identifying human rights risks and examining corrective measures to be taken at the JFE Group	Discussed the method, priorities, and scope for conducting a survey throughout the supply chain	Revised the JFE Group Human Rights Basic Policy and reviewed the procurement guidelines of operating companies		Joined the Japan Center for Engagement and Remedy on Business and Human Rights (JaCER) as a full member	
	Human rights risk surveys of own operations						
	JFE Holdings and Operating Companies						
	Human rights risk surveys of suppliers						
	JFE Steel Number of business partners: about 2,200 companies			Conducted a survey of 232 material and raw material suppliers	Followed up on 39 surveyed companies with high vulnerabilities	Conducted a survey of 218 material and raw material suppliers	Follow up with surveyed companies that are high in vulnerability and risk Conduct a survey of raw material suppliers (10–20 suppliers) Start a survey of new business partners
	JFE Engineering Number of business partners: about 3,700 companies			Conducted a survey of 107 major suppliers	Followed up on 42 companies with high vulnerabilities among surveyed companies	Conducted a survey of 76 major suppliers Started a survey of new business partners Start a survey of new business partners	Follow up on 36 surveyed companies with high vulnerabilities
	JFE Shoji Number of business partners: about 2,800 companies			Conducted a survey of 65 suppliers of steel raw materials, environmental resources, and equipment and materials	Followed up with all the surveyed companies		
					Conducted a survey of 88 suppliers of steel raw materials, environmental resources, and equipment and materials	Followed up with all the surveyed companies	
						Conducted a survey of 14 steel suppliers	Follow up with all the surveyed companies
Group Companies	**Human rights risk surveys of major domestic Group companies' own operations**						
	JFE Steel (all 28 companies)	3 companies	2 companies	23 companies			
	JFE Engineering (all 41 companies)	3 companies	2 companies	26 companies	10 companies		
	JFE Shoji (all 40 companies)	2 companies	2 companies	36 companies			
	Human rights risk surveys of major overseas Group companies' own operations						
	JFE Steel (all 6 companies)				3 companies	3 companies	
	JFE Engineering (all 11 companies)	1 companies			3 companies	3 companies	3 companies
	JFE Shoji (all 45 companies)				45 companies		
	Risk survey of suppliers of Group companies						
	JFE Steel Group Companies						Conduct supplier risk surveys at three domestic Group companies
	JFE Engineering Group Companies						Conduct supplier risk surveys at two domestic Group companies
	JFE Shoji Group Companies						Conduct supplier risk surveys at two domestic Group companies

	Overview
FY2021	• Identified human rights risks and examined corrective measures to be taken at JFE Holdings and other Group companies, including operating companies
FY2022	**Expanding Human Rights Due Diligence to Group Companies** • To ensure that Group companies properly identify, assess, mitigate, and prevent human rights risks, the following initiatives were implemented. (1) Held briefings on human rights (2) Conducted surveys of major domestic Group companies that are a high priority for the surveys
	Establishing a Human Rights Risk Management System for Suppliers • Discussed the method, scope, and priorities for conducting a survey on human rights risks throughout the supply chain • Selected suppliers that are a high priority for a survey, such as those based in countries with high human rights risks
FY2023	**Revised the JFE Group Human Rights Basic Policy (established in 2018)** • Each operating company inspected and revised its procurement guidelines in line with the revised policy
	Expanding Human Rights Due Diligence to Group Companies • Further expanded the survey from the previous year and completed surveys of all major domestic Group companies (about 100 companies in total)
	Establishing a Human Rights Risk Management System for Suppliers • Conducted a survey on human rights risks for about 400 high-priority suppliers
FY2024	**Expanding Human Rights Due Diligence to Group Companies** • ST EN SH Conducted a survey on human rights risks for about 50 high-priority overseas Group companies and provided feedback on the results • SH Methods and schedule for rolling out supplier surveys by Group companies were considered for major domestic Group companies
	Establishing a Human Rights Risk Management System for Suppliers • ST EN SH Provided feedback on survey results to suppliers surveyed in FY2023, and supported improvements for those requiring follow-up • SH Conducted a survey on human rights risks with 88 newly covered suppliers of steel raw materials, environmental resources, and equipment and materials
FY2025	**Expanding Human Rights Due Diligence to Group Companies** • ST EN Conducted a human rights risk survey with six overseas Group companies • SH Provided feedback on the results to the overseas Group companies surveyed in FY2024
	Establishing a Human Rights Risk Management System for Suppliers • ST EN Conducted a second-round survey of approximately 300 high-priority suppliers • SH Conducted a new survey on human rights risks with approximately 14 steel suppliers • EN Started a survey on human rights risks with new suppliers
FY2026 (plan)	**Conducting Human Rights Risk Surveys of Own Operations** • ST EN SH Conduct second-round human rights risk surveys of own operations
	Expanding Human Rights Due Diligence to Group Companies • EN Conduct a human rights risk survey with three overseas Group companies • ST EN SH Start supplier surveys at seven domestic Group companies
	Establishing a Human Rights Risk Management System for Suppliers • ST EN SH Provide support for improvement to suppliers surveyed in FY2025 who were identified as requiring follow-up • ST Conduct a second-round survey on human rights risks with approximately 10 to 20 raw material suppliers • ST EN Conduct a human rights risk survey of new suppliers

Human Rights Due Diligence Process



❶ Identify human rights risks

We created a long list of human rights risks by referring to international norms and guidelines. Then, taking into account human rights risks specific to the industry, regional characteristics, and other relevant factors, we identified human rights risks related to the Group and its supply chain by stakeholder such as employees, suppliers, and local residents.

International norms and guidelines referenced:

United Nations Guiding Principles on Business and Human Rights, International Bill of Human Rights, ILO's Core Labor Standards, OECD Guidelines for Multinational Enterprises, Ten Principles of the UN Global Compact, GRI Standards, FLA Workplace Code of Conduct, and CHRB Key Industry Risks.

15 human rights issues to consider:

Compliance with standards and guidelines for respect for human rights demanded by international norms	Avoiding complicity in human rights abuses, compliance, social security, and fair competition	Prohibition of discrimination and equality before the law
Access to remedy	Thorough supplier management	Harassment and abuse
Women's rights	Child labor	Forced labor
Occupational health and safety	Working hours	Appropriate working environment
Wages that guarantee a decent standard of living	Freedom of association and the right to collective bargaining	Rights of indigenous and local people

❷ Investigate current status

We ascertained the current status of the risk management system and activities by examining our disclosure of policies on child labor, forced labor and various other human rights risks, such as the JFE Group Human Rights Basic Policy and the Basic Procurement Policy of each company, our whistleblowing system for ensuring access to remedy,, our initiatives on compliance including prevention of corruption, and other initiatives, systems and rules concerning internal and external human rights issues.

❸ Assess risks and determine impacts

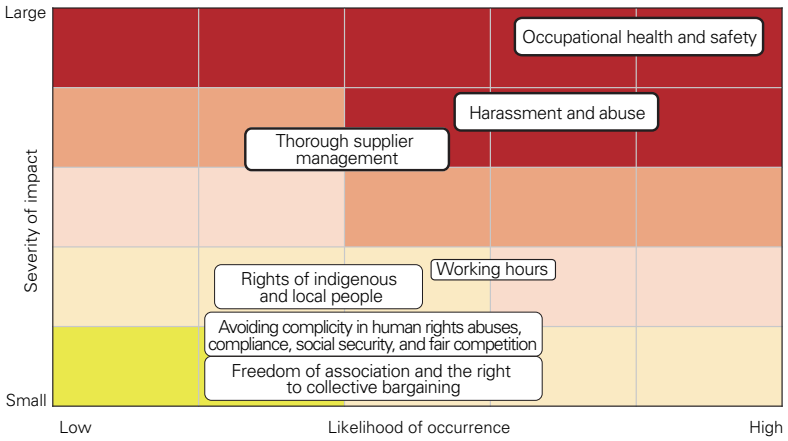
We assessed the risks of the identified human rights issues to be considered, based on the severity of impact and likelihood of occurrence, and determined the status of our initiatives on respecting human rights through written surveys and interviews in order to better identify that status in our future endeavors. During the risk assessment, we also determined the adverse impacts of human rights risks on the JFE Group and its stakeholders.

› **Stakeholder Engagement** (P. 37)

Human rights risks identified as particularly high risk and requiring action:

- Occupational health and safety
- Harassment and abuse
- Thorough supplier management (establishment of a human rights risk management system for the entire supply chain)

ST EN SH Map of Key Human Rights Risks



❹ Consider mitigation measures for identified human rights risks

We implement mitigation measures for the identified human rights risks, including response as well as preventive and corrective measures and promotion systems. For occupational health and safety and harassment, we continue to strengthen our efforts to eliminate accidents and harassment using KPIs.

To create a sustainable and resilient supply chain, we are establishing a human rights risk management system encompassing the entire supply chain. We will also conduct surveys on the human rights risks of suppliers by determining the priority of the surveys based on the severity of the impact of such risks and the likelihood of their occurrence.

› **FY2025 KPI Results and FY2026 KPIs** (P. 19)
› **Occupational Health and Safety** (P. 202)
› **Social Data: Lost-Work Injuries and Accidents** (P. 288)
› **Governance Data: Whistleblowing** (P. 296)

❺ Information disclosure to stakeholders

We disclose the JFE Group Human Rights Basic Policy, guidelines for procurement at each operating company, and other related information on our website to communicate our initiatives to respect human rights, including human rights due diligence, and their status to our stakeholders.

FY2025 Initiatives

Establishing a Human Rights Risk Management System for Suppliers

ST EN SH FY2025 Supplier Survey

The details of the supplier selection method, survey method, and other aspects of the FY2025 survey are summarized below.

ST

Scope of Survey

In FY2025, JFE Steel conducted a second-round survey targeting suppliers that met the following criteria.

- Raw materials: Selected primary suppliers whose headquarters or production sites are in countries with high human rights risks*1 as well as secondary suppliers through JFE Shoji or JFE Mineral
  ➡ About 67 of approx. 700 suppliers were surveyed
- Materials: Selected manufacturers of critical materials*2 and their trading companies
  ➡ 151 of approx. 1,500 suppliers were surveyed

Survey Method

To conduct supplier surveys, we used the CSR/Sustainable Procurement Self-assessment Tool Set*3, developed by the Global Compact Network Japan, and starting in FY2025 we have also used our own SAQ to check whether human rights violations have occurred. We set "high risk questions"*4 in the tool questionnaire as items requiring particular focus, and we will follow up with suppliers that scored poorly on those items.

EN (1) Second-Round Survey of Suppliers

Survey Scope

In FY2025, JFE Engineering conducted a second-round survey targeting suppliers with capital of at least 50 million yen, with which the company continues to do business and which meet the following criteria.

① Suppliers that scored poorly on "high risk questions"*4 in the FY2023 survey and with which the company continues to do business
② Suppliers whose headquarters or production sites are located in countries with high human rights risks*1
③ Suppliers that provide high-risk products and materials*5
④ Key suppliers on which the company is highly dependent, such as business partners or sole-source suppliers for technical reasons
⑤ Suppliers with a relatively large business scale and high order value*6
➡ 76 of approx. 3,700 suppliers were surveyed

Survey Method

We conducted supplier surveys using the CSR/Sustainable Procurement Self-assessment Tool Set*3 of the Global Compact Network Japan. In conducting the surveys, we set "high risk questions"*4 as items requiring particular focus, and we will follow up with suppliers that scored poorly on those items.

(2) Surveys of New Suppliers, etc.

Scope of Surveys

JFE Engineering started conducting a simple risk survey in July 2025 to assess the presence of human rights risks. This survey is conducted at the start of doing business with a new supplier and when updating registration information every three years for existing suppliers. We only start or continue transactions once we have confirmed there are no risks. In FY2025, one supplier was found to present risks during the simple risk survey, and we obtained a commitment from them to correct the identified risks before doing business with them.

Survey Items

Twelve items, including whether the business involves forced or child labor and whether any entertainment or gifts have been given to public officials in violation of laws or regulations

SH

Scope of Surveys

Steel suppliers that meet any of the following criteria were selected and surveyed by JFE Shoji.

① Suppliers whose headquarters or production sites are located in countries with high human rights risks*1

② Suppliers that provide high-risk product categories*7

③ Suppliers that fall within the top 75% in procurement value based on purchase amount

➡ About 14 of approx. 400 suppliers were surveyed

Survey Method

We conducted supplier surveys using the CSR/Sustainable Procurement Self-assessment Tool Set*3 of the Global Compact Network Japan. In conducting the surveys, we set "high risk questions"*4 as items requiring particular focus, and we will follow up with suppliers that scored poorly on those items.

*1 Selected based on published indexes (such as the Human Rights Index compiled by Our World in Data) and advice from an advisory body
*2 Materials affecting operations and the quality of steel products, selected by the relevant departments (e.g., refractories, rolls, chemicals)
*3 An assessment tool issued and published by the Supply Chain Subcommittee and consisting of 114 questions covering human rights, labor, fair business practices (prevention of violations of competition law, prevention of corruption, prohibition of conflicts of interest, etc.), and other areas
*4 Items set as "high risk questions," including payment of fair wages; fair management of working hours, leave, and paid holidays; prohibition of forced labor; prohibition of child labor; and conflict minerals
*5 Selected based on advice from an external advisory body. Solar panels, batteries, PKS, etc.
*6 At least ¥1 billion or at least 100 transactions per year
*7 Materials selected from lists published by Japan's Ministry of Economy, Trade and Industry (METI) and by the U.S. Department of Labor and Department of State (e.g., iron ore, coal)

Expanding Human Rights Due Diligence to Group Companies

① ST EN SH Human Rights Risk Surveys of Overseas Group Companies' Own Operations

ST At JFE Steel, we conducted assessments and interviews at three high-priority overseas Group companies in the Philippines, United States, and Singapore, taking into account such factors as equity stake and company size. Reviewing the results, we found deficiencies in management systems and preventive and remedial frameworks for certain human rights issues, such as thorough management of business partners, harassment, and abuse. Accordingly, JFE Steel provided feedback on the results and shared examples of remediation measures. Each company is now working on such actions as strengthening systems and revising regulations.

EN At JFE Engineering, we conducted human rights risk assessments and interviews at three high-priority overseas Group companies in Malaysia, Indonesia, and Germany. These companies were selected based on factors such as the presence of sites in countries with high human rights risks. The assessments, focused on the occurrence of human rights risks and the effectiveness of management systems, identified no major human rights risks at any of the companies and no high-priority issues requiring action. However, given the presence of risks such as child labor and forced labor in each of the countries where the sites are located, the assessment confirmed that further efforts would be desirable. These include clarifying the departments responsible for addressing high-risk human rights issues in each country and strengthening initiatives to prevent occupational accidents. We accordingly provide feedback on the assessment results and work to mitigate human rights risks by sharing examples of initiatives at JFE Engineering and good practices from other companies.

SH At JFE Shoji, we provided feedback on the results to 45 overseas group companies surveyed in FY2024. We introduced priority-based actions, giving top priority to high-risk items that were particularly emphasized in the survey, as well as specific examples of measures taken.

② ST EN SH Surveys of Group Companies' Suppliers

Human rights due diligence on our major Group companies confirmed that thorough supplier management is an issue. We therefore considered which Group companies to prioritize, the survey methods, and other aspects in order for major domestic Group companies to start supplier surveys.

Future Initiatives

We will promote initiatives to correct and mitigate identified human rights risks and take the following actions to expand our human rights due diligence. To steadily advance our initiatives, we will conduct appropriate evaluations and make improvements under the supervision of the JFE Group Sustainability Council and Board of Directors, thereby enhancing effectiveness.

ST EN SH Conducting Human Rights Risk Surveys of Own Operations

In the second half of FY2026, we will once again identify and assess human rights issues and the impacts of human rights risks. We will also consider measures to mitigate human rights risks in the future, based on increasing public demand, expanding business activities and changes in our business environment, and the activities carried out to date to reduce human rights risks.

Expanding Human Rights Due Diligence to Group Companies

① EN **Human Rights Risk Surveys of Overseas Group Companies' Own Operations**

JFE Engineering will conduct human rights risk surveys at three major overseas Group companies in Vietnam, China, and the United States.

② ST EN SH **Surveys of Group Companies' Suppliers**

Supplier surveys will be conducted at seven domestic Group companies in FY2026, taking into account factors such as company size and supply chain characteristics.

ST Within the JFE Steel Group, supplier surveys are scheduled to be conducted at three domestic Group companies.

Target Suppliers

Suppliers are selected based on the following criteria.

① Suppliers with ongoing business relationships
② Suppliers providing products sourced from countries with high human rights risks
③ Suppliers operating in countries with high human rights risks
④ Suppliers providing products of high importance to the company

Survey Content

Same content as the survey conducted by JFE Steel in FY2025

EN The JFE Engineering Group plans to conduct supplier surveys at two domestic Group companies.

Target Suppliers

Selected based on JFE Engineering's selection criteria while taking into account the nature of each company's business operations

Survey Content

Same content as the survey conducted by JFE Engineering in FY2025

SH Within the JFE Shoji Group, supplier surveys are scheduled to be conducted at two domestic Group companies.

Target Suppliers

Selected based on JFE Shoji's selection criteria while taking into account the nature of each company's business operations

Survey Content

Survey conducted using the CSR/Sustainable Procurement Self-assessment Tool Set of the Global Compact Network Japan and a proprietary SAQ to check human rights violations

Establishing a Human Rights Risk Management System for Suppliers

In FY2026, each operating company plans to implement the following initiatives.

ST In FY2026, JFE Steel will provide feedback on the survey results to suppliers surveyed in the previous fiscal year. For approximately 151 suppliers identified as requiring follow-up, the company will send a follow-up tool and provide support for improvement, including verifying the status of improvements by the target companies based on priority levels. It also plans to conduct a second-round survey of 10 to 20 raw material suppliers with high survey priority. Furthermore, when starting business with new suppliers that meet the same selection criteria used for existing partners (raw material suppliers: Tier 1 suppliers headquartered in or sourcing from countries with high human rights risks, and Tier 2 suppliers via JFE Shoji or JFE Mineral; and material suppliers: manufacturers of critical materials and their trading companies), JFE Steel will verify the status of systems for respecting human rights, request corrective action for any deficiencies, and subsequently monitor progress in implementing improvements.

EN In FY2026, JFE Engineering will provide feedback on the survey results to suppliers surveyed in FY2025. For the 36 business partners identified as requiring follow-up, the company will send a follow-up tool to support improvement efforts. In addition, when starting business with new suppliers, the company will continue to use questionnaires to check whether any risk incidents have occurred in the supply chain and assess the status of corrective actions. This information will be used to guide transaction decisions and follow-up on corrective actions.

SH In FY2026, JFE Shoji will provide feedback on the results of the FY2025 supplier survey. It will also offer support for improvement to the approximately five business partners identified as requiring follow-up, including by sending them a follow-up tool.

Human Rights Promoting Activities

To steadily advance our activities to respect human rights and raise employee awareness, we conduct human rights training courses, offer guaranteed equal employment opportunities, promote fair human-resource management, and actively prevent workplace harassment. Our training courses encourage employees to develop a thorough understanding of the JFE Group Human Rights Basic Policy and the respect for human rights expected of companies in the international community. To this end, we use the percentage of scheduled participants who attend training as a KPI and continuously measure and follow up on this rate (attendance rate in FY2025: 100%). In addition, employees in the procurement department receive training and information on the overall sustainability situation surrounding the company, as well as the JFE Group's stance and initiatives.

We seek to prevent sexual harassment, power harassment, and other forms of harassment by addressing these issues in company regulations, displaying posters in workplaces, and regularly conducting harassment prevention training for all employees as well as by position (including management), individual offices, and executives. These programs include sessions that raise awareness and provide practical training using case studies to address everyday communication, the use of reporting and consultation channels if harassment occurs, and appropriate responses.

In addition, we invited an outside attorney to conduct a seminar for corporate ethics hotline and harassment consultation desk staff (those who receive reports, including management) within the JFE Group. Every other year, we organize these training sessions for hotline and consultation desk personnel, including content on confidentiality obligations when receiving reports and case studies (participants: approx. 200 in FY2020, approx. 300 in FY2022, and approx. 300 in FY2024).

Furthermore, we actively support and take part in initiatives undertaken by public organizations and groups promoting human rights as well as groups in which private enterprises participate, such as the Industrial Federation for Human Rights, Tokyo and the Corporate Federation for Dowa and Human Rights Issue, Osaka. By attending seminars and workshops sponsored or supported by such organizations and groups, we have become increasingly aware of human rights trends and challenges as well as issues specific to Japanese business. We then apply this knowledge in JFE human-rights awareness training programs and related initiatives.

Respecting the Rights of Workers

The JFE Group adheres to the laws and regulations of various countries as well as collective agreements. It also respects the rights to freedom of association as well as their right to collective bargaining.

Upper management, including the president and the representative of the union, meets regularly to discuss matters such as management issues, work-life-balance, working environments, and working conditions. By conducting earnest labor-management consultations, we strive to create a vigorous workplace while working to maintain healthy and sound labor-management relations.

The JFE Group complies with laws and regulations related to salary payments and sets salaries above the minimum wage designated by country, region, and industry sector. In addition to meeting legal requirements concerning the upper limits for overtime and other mandates, the JFE Group strives to improve employees' work engagement by providing them with one of the top levels of employment conditions in the industry as well as performance-based bonuses linked to company profits.

We regularly review the wage situation in each region and business sector and engage in honest discussions with the labor union to ensure a fair return to our employees while also paying due consideration to management and business performance.

Respect for Freedom of Expression

The JFE Group upholds basic human rights in its Human Rights Basic Policy and is committed to respecting and protecting the human rights of each individual throughout its corporate activities. We pay due care to prevent violations of the freedom of expression, as recognized by the International Covenant on Human Rights and other international conventions, and to fully protect the right to privacy.

Respect for Children's Rights

The JFE Group supports the Convention on the Rights of the Child and Children's Rights and Business Principles and will seek to eliminate child labor and respect every child's right to survival, right to development, right to protection, and right to participation, the four pillars of the Convention on the Rights of the Child.

The JFE Group Human Rights Basic Policy upholds recognizing the diverse values held by each individual in all aspects of corporate activity as well as respecting and protecting the human rights of each person in compliance with international conventions. It also explicitly prohibits child labor and forced labor. To promote concrete initiatives, the JFE Group has focused on nurturing the next generation as a key area of its public service and is engaged in activities that support the sound development of younger generations.

In 2025, there were no consultations or reports regarding child labor on JaCER's Engagement and Remedy Platform or the Group's Corporate Ethics Hotline.

Endorsing and Participating in External Initiatives

We are a member of the Global Compact Network Japan, an organization that promotes Global Compact activities in Japan, in support of the Ten Principles of the United Nations Global Compact, related to the protection of human rights, the elimination of unfair labor practices, environmental protection, and the prevention of corruption. We also participate in subcommittee activities of the Global Compact Network Japan and promote our own initiatives based on exchanging information with participating companies and organizations.

Respecting Human Rights across the Supply Chain

ST Compliance with the JFE Steel Procurement Guidelines and Responsible Procurement of Raw Materials

In accordance with the JFE Group Human Rights Basic Policy, JFE Steel established the JFE Steel Procurement Guidelines in 2023, which incorporate more extensive and specific information on sustainability in general, in addition to respect for human rights. To promote sustainability initiatives throughout the supply chain, we disclose the guidelines on our website, inform all primary business partners of the guidelines, and request compliance from them.

In terms of raw material procurement in particular, there is concern that tin, tantalum, tungsten, gold, and cobalt provide a funding source for militias causing human rights violations and environmental destruction. Therefore, JFE Steel purchases them only after confirming that they have not been mined in conflict-affected or high-risk areas, in accordance with Japanese and overseas regulations governing the responsible procurement of minerals as well as international rules.

In January 2026, we held a briefing session attended by about 100 suppliers to explain the sustainability-related circumstances facing companies, the JFE Group's stance and initiatives, and its requests to suppliers.

For JFE Steel Procurement Guidelines, please refer to:

> **JFE Steel Procurement Guidelines** (https://www.jfe-steel.co.jp/en/company/purchase_policy.html#to-our-business-partners)

EN Promoting Initiatives to Respect Human Rights in Cooperation with Suppliers

In line with the JFE Group Human Rights Basic Policy, JFE Engineering has established its Purchasing and Procurement Policies and is promoting sustainable procurement in cooperation with suppliers to advance initiatives related to respect for human rights. It has also established procurement guidelines asking suppliers to comply with laws, regulations, and social norms in their business activities, respect basic human rights, eliminate all forms of discrimination, and strive to create a safe and comfortable working environment. The company ensures that the guidelines are clearly communicated throughout the supply chain by publicizing them on its website. It also requires business partners to comply with the guidelines as a prerequisite for starting business transactions, and sends them an email with a link to the guidelines.

For JFE Engineering's Procurement Policy and Procurement Guidelines, please refer to:

> **Procurement Policy** (https://www.jfe-eng.co.jp/en/information/procurement_policy.html)

> **Procurement Guidelines** (https://www.jfe-eng.co.jp/en/information/procurement_policy.html)

SH Promotion of Respect for Human Rights in the Supply Chain

In line with the JFE Group Human Rights Basic Policy, the JFE Shoji Group has established the Basic Policy on Sustainability in the Supply Chain to promote joint efforts with suppliers in respecting human rights and advancing sustainability as a whole.

The policy is disclosed on the company's website and sent to all of its business partners, requesting their compliance with the policy.

For JFE Shoji's Basic Policy on Sustainability in the Supply Chain, please refer to:

> **Basic Policy on Sustainability in the Supply Chain** (https://en.jfe-shoji.co.jp/corporate/principle/#section03)

Providing Quality Products and Enhancing Customer Satisfaction

Basic Policy

Under its corporate philosophy of contributing to society with the world's most innovative technology, the JFE Group will continue to be a company that provides world-class products and services for a prosperous global future.

JFE Group Standards of Business Conduct

❶ Provide quality products and services
Earn the trust and acclaim of customers by endeavoring to provide safe, high-quality products and services based on superior technologies, and by fully respecting and protecting the privacy of personal and customer information. Also, leverage our superior technologies for the sustainable growth of our Group and society.

Targets and Results

Under its Standards of Business Conduct to provide quality products and services, the JFE Group has identified three key management concerns: sustainable manufacturing through improving sales and production capabilities, promoting proper quality assurance, and enhancing product and service competitiveness through DX. The Group has established KPIs to monitor progress and promote relevant initiatives.

› **FY2025 KPI Results and FY2026 KPIs** (P. 19)

Initiatives

JFE Group's Quality Initiatives

The JFE Group manages quality by ensuring compliance with quality standards set by each operating company. Each operating company involved in manufacturing and services has obtained ISO 9001 certification for its quality management system and has established and operates a management system to continuously and reliably provide high-quality products and services.

Strengthening Quality Assurance System

ST Initiatives to Improve Product Quality

To serve customers by meeting their quality requirements and delivering products that boast the world's highest quality, JFE Steel has established a quality assurance system with advanced sensors for process monitoring, in addition to its ongoing efforts to develop new products and advanced manufacturing technologies.

We are conducting activities across the company in line with the Guidelines for Enhancing Quality Assurance Systems formulated by the Japan Iron and Steel Federation (JISF) to strengthen our quality assurance system. In addition to conducting product tests using high-precision testing and inspection equipment, we are striving to thoroughly prevent errors in identification tasks and data tampering by promoting automation in every process, from issuing test instructions and collating specimens to reporting results.

Moreover, the company intends to provide customers with innovative value by operating its quality management system based on ISO 9001 and by advancing the acquisition of various domestic and international assurance certifications required for steel products, including the JIS mark and approvals from ship classification bodies. We are also actively promoting the formation and standardization of international rules in conjunction with future DX promotion and the social implementation of technologies obtained through research and development.

EN Promoting Quality Activities Based on the Companywide Quality Policy

JFE Engineering has established a companywide quality policy stating that products and services that JFE Engineering designs, procures, manufactures, or constructs must comply with all required rules, regulations, and standards, and quality must satisfy the needs of our customers and that we will continually undertake improvements. Under this corporate policy, the company continually strives to improve the quality of its products and services.

Specifically, our certified inspectors conduct on-site inspections at each phase of a plant construction project, including procurement, manufacturing, construction, and pilot operations. We also conduct witness inspections by customers during critical processes and at the time of equipment delivery to ensure quality.

In addition, JFE Engineering has published quality-assurance manuals based on the specific characteristics of each product and obtained ISO 9001 certification for each product category.

To further strengthen its quality assurance system, JFE Engineering uses an electronic document processing system throughout the entire process, from purchases to installation and operation, to prevent omissions in inspection and operation data and data tampering, and all inspection data is electronically stored to further ensure traceability.

SH Maintaining and Improving Quality Assurance Level Based on Quality Philosophy

Guided by its quality philosophy of continuing to provide products that satisfy the required quality to ensure that we are always trusted by our customers, JFE Shoji is constantly striving to enhance the level of its quality assurance for customer confidence and satisfaction. Its processing centers in Japan and abroad are systematizing and automating operations to eliminate human errors. Raising employee awareness is essential for preventing human error at every stage, from receiving orders to processing, inspecting, and shipping. The company provides quality education for employees by introducing case studies of nonconformance at other companies as well as at Group companies in Japan and abroad. Moreover, we conduct periodic quality audits at all relevant Group companies in and outside of Japan to identify quality assurance risks, and we provide follow-up toward improvement. When follow-up is necessary, individual responses are carried out to maintain and enhance the level of quality assurance.

Stable Supply of Products

ST Initiatives to Supply High-Quality Products

JFE Steel is strengthening its manufacturing base by introducing a cyber-physical system (CPS) for all manufacturing processes and has already introduced CPS to over 80% of these processes. It is also accelerating the deployment of CPS with J-DNexus™, a platform that integrates production data from all steelworks. In addition, the company is improving quality and yield by fully implementing J-astquad™, a quality prediction technology that uses integrated data covering the entire process, from steelmaking to the final stage. The company is improving reliability by automating product inspections. It completed the migration to open systems for its steelworks' core systems at the end of FY2025. And it will also develop a platform for consolidating and using operational data and know-how, further improving production efficiency and quality.

EN Securing Managing Engineers

JFE Engineering has been designated as a special construction business operator under the Construction Business Act to undertake mechanical, civil engineering, and building construction work, and it assigns dedicated managing engineers at construction sites to oversee the technical aspects of construction work. The smooth implementation of plant construction projects depends on licensed specialists. The company is always striving to secure the necessary human resources by encouraging employees to acquire qualifications by granting allowances and through mid-career hiring of licensed personnel.

Proper Export Procedures

Each JFE operating company promotes international peace and security by working against the spread of weapons of mass destruction and excess accumulation of conventional weapons. Specifically, the company carries out internal inspections to confirm the final destinations, customers, and applications of its exported products and then ensures that export procedures are carried out properly. In addition, the Legal Affairs Department conducts internal briefings to disseminate knowledge of export-related laws and regulations, such as the Foreign Exchange and Foreign Trade Act. Also, education on export security controls and related measures is implemented for the employees of Group companies involved in trading.

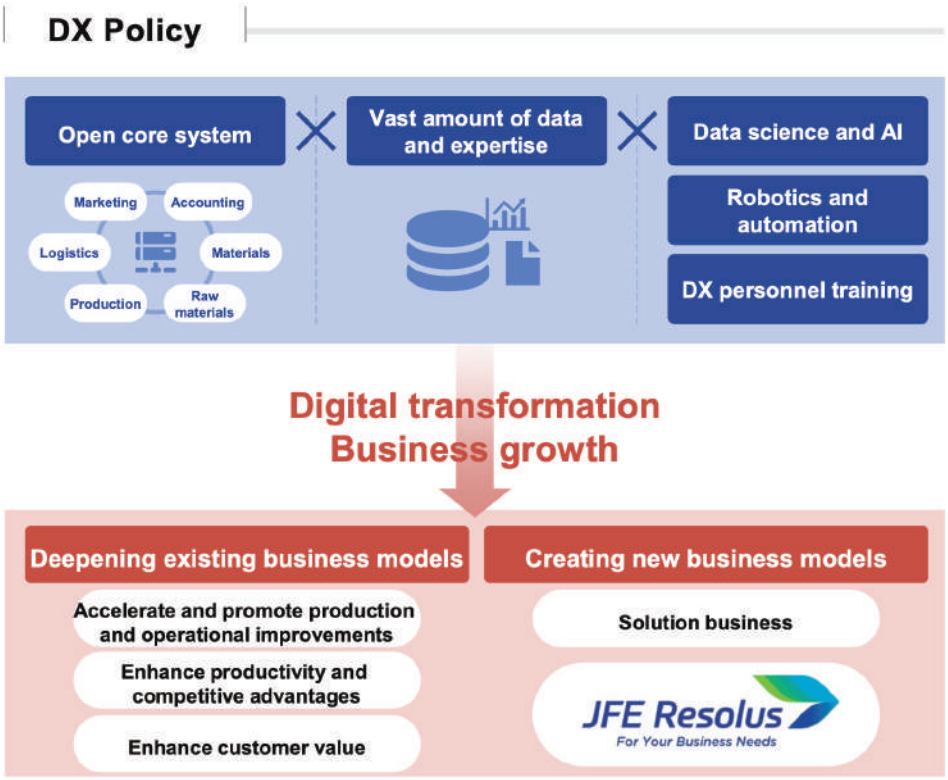
Improving Customer Satisfaction

ST Aggressive Advancement of DX

JFE Steel's digital transformation (DX) strategy revolves around technological innovation based on the active introduction of advanced technologies such as IoT, AI, and data science (DS) and the application of data assets.

These technological and data assets will not only transform production and business processes but also lead to the expansion of the company's solutions business, contributing to addressing challenges across the entire manufacturing industry. This will enable the company to establish a competitive advantage and achieve sustainable growth in corporate value.

Advancement of Digital Transformation (DX)



For more information on our DX, please refer to:

› **DX REPORT** (https://www.jfe-holdings.co.jp/en/investor/library/dxreport/index.html)

ST Testing and Research Centers for Collaboration with Customers on Product Development

JFE Steel collaborates with customers in research and development. The Customers' Solutions Lab (CSL) for auto industry customers and the JFE Welding Institute-Center for Integrity against Fatigue and Fracture (JWI-CIF2) are located in eastern Japan, while the Customer Center Fukuyama (CCF), which develops materials and conducts applied technology research, is in western Japan. Using these facilities to strengthen early vendor involvement (EVI)* enables the company to quickly identify customer needs and develop products based on cutting-edge evaluation techniques and innovative production processes.

*Participation in customers' new product development from an early stage to propose and develop steel applications, component processing methods, and performance evaluations suited to the new product concept.



Customers' Solutions Lab

ST Enhancing Our Response to Customer Needs

In an effort to strengthen the company's total capabilities for better responding to customer needs, its sales department emphasizes enhanced sales education for sales personnel by position at the headquarters and branch offices. Specifically, we develop abilities in areas such as engaging in technical conversations, picking up clues from customer relations and using them in product development, offering suggestions to improve logistics and distribution, and analyzing financial indicators and costs. We also constantly strive to improve our systems so that customer product specifications are accurately reflected in manufacturing, and we will continue to work on improvements.

ST Unified Customer Care

JFE Steel regularly conducts customer questionnaires and interviews to draft strategies for greater customer satisfaction. Business strategies are shared among the sales divisions, the business planning functions, and steelworks to facilitate unified customer care and proposals that leverage the collective strengths of the JFE Group.

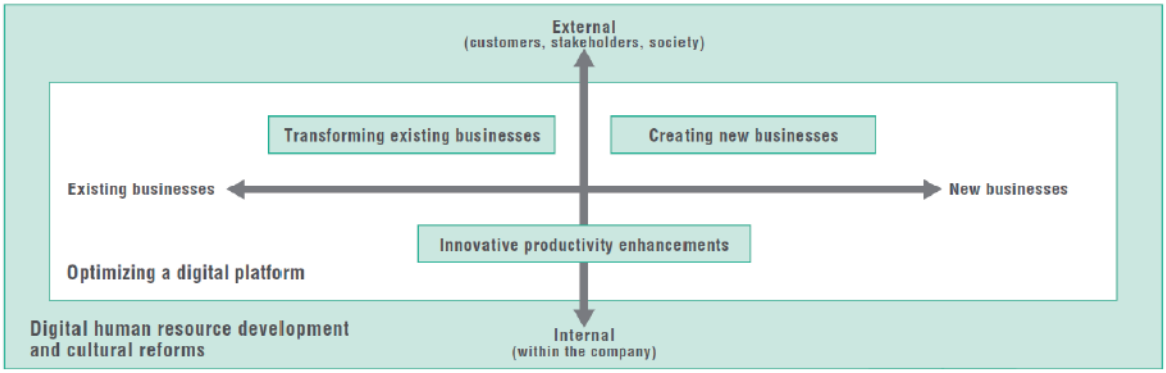
EN Create and Continue to Care for the Foundation of Life by Maximizing DX

JFE Engineering plans, designs, builds, and operates the infrastructure that supports people's lives and industry.

Digital transformation (DX) is a crucial growth engine for transforming and accelerating these businesses.

The company aims to improve overall business productivity and profitability by leveraging data accumulated over many years of infrastructure construction and operation to enhance decision-making and by automating and improving operations through DX after optimizing business processes. By digitizing a wide range of operations and creating new strengths and added value, DX will powerfully drive JFE Engineering's evolution as a company that creates and continues to care for infrastructure, contributing to global efforts to achieve carbon neutrality and promote a circular economy.

JFE Engineering's DX Strategy



For more information on our DX, please refer to:

> **DX REPORT** (https://www.jfe-holdings.co.jp/en/investor/library/dxreport/index.html)

EN Company Assessments Based on Customer Evaluations

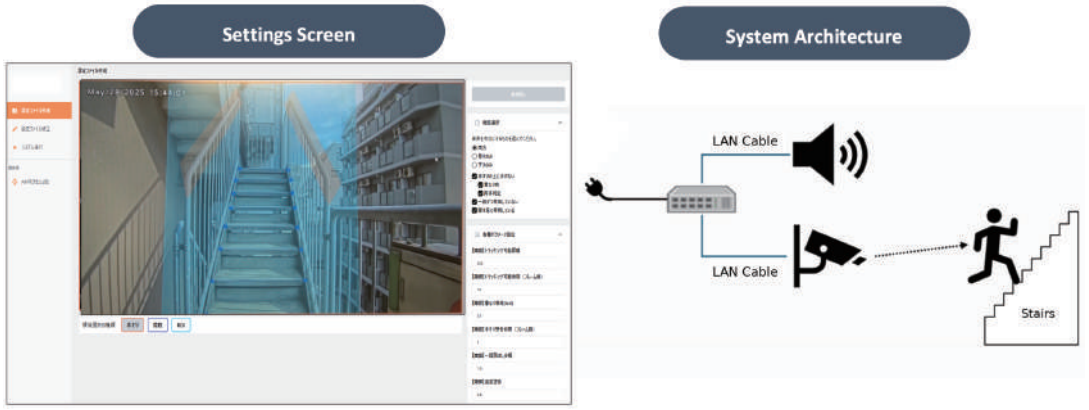
JFE Engineering uses customer surveys, interviews, and contractor performance evaluation forms to collect and assess data on the company's construction management, quality, advanced technologies, and innovation. Each division analyzes and applies the data for quality improvement, new product development, and the overall strengthening of aftersales service to ultimately enhance customer satisfaction.

SH Establishing a System to Meet Customer Needs

To respond to diversifying markets and increasingly advanced customer requirements, JFE Shoji is exploring the introduction of DX solutions that take advantage of the strengths of the JFE Shoji Group. Placing safety as a central theme, JFE Shoji Electronics Corporation, a JFE Shoji subsidiary, has begun offering a Safety AI System that detects entry into hazardous areas, detects people throughout the roll area, and monitors workers' behavior at manufacturing sites. As unsafe behavior is a major cause of workplace accidents, JFE Shoji Electronics has also begun offering an AI camera for stair safety. The system monitors whether workers hold handrails, their speed, and how they ascend and descend stairs, automatically detecting unsafe behavior in real time and issuing immediate warnings to help prevent accidents.

Stair Safety AI Camera

- After the handrails, stairs, and detection range have been configured, the camera and speaker automatically detect unsafe behavior and issue warnings. Video footage can also be reviewed later using CSV data.
- Introducing the camera is expected to reduce workplace accidents, raise safety awareness, and lower management costs.



For more information on our DX, please refer to:

> **DX REPORT** (https://www.jfe-holdings.co.jp/en/investor/library/dxreport/index.html)

Promotion of Research and Development

ST Promoting Technological Development to Meet the Needs of Customers and Society at Large

JFE Steel is advancing research and development of innovative technologies in the steelmaking process to contribute to achieving carbon neutrality by 2050. These include CO_2 reduction technology, carbon-recycling blast furnaces with CCU, and hydrogen-based ironmaking. The company is also actively applying data science and robotics to drive technological development that meets the evolving needs of customers and society at large.

In addition, JFE Steel is accelerating the introduction of new products and solutions for each field, with automobiles, including EVs, and new energy as key areas of R&D.

EN Promoting Research and Development Based on the Long-Term Vision

JFE Engineering conducts R&D to achieve its FY2035 target of contributing to a reduction of 30 million tonnes in CO_2 emissions. Key initiatives include developing manufacturing technologies for monopile foundations for offshore wind power generation, technology for detecting abnormalities in wind turbine blades, CO_2 separation and capture technology, waste-to-chemical technologies that convert waste into chemical raw materials, and a new catalyst for producing sustainable aviation fuel (SAF) from a mixture of carbon monoxide (CO) and hydrogen (H_2).

Internal Awards

The following technical and product developments were awarded in FY2025.

Internal Awards (FY2025)

	Prize/Award	Project	Recipient
JFE Steel	Award of Excellence, JFE Steel President's Awards	Establishing a scheme for the continued adoption of JGreeX™ in ocean-going bulk carriers	Logistics Planning Department
		Establishing an optimal production system for steel sheets for cans by consolidating and stabilizing manufacturing bases	Thin Plate Sector Department
		Achieving quality improvement and operational stability by developing the world's most advanced pickling line surface inspection equipment	Steel Research Institute Cyber-Physical Systems Research and Development Department
		Rebuilding the utility supply system in the Keihin area	Planning Department, East Japan Works
		Realizing stable blast furnace operation by developing highly efficient and high-production technology for granular iron	Equipment Department, East Japan Works
		Reducing the companywide hot metal charging ratio through the development of technology to lower hot metal charging ratios	Steelmaking Department, West Japan Works (Fukuyama District)
JFE Engineering	Award of Excellence, JFE Engineering President's Awards for Technology Development	Japan's first large-scale ammonia co-firing engine developed and commercialized, achieving a co-firing rate of over 50% to promote decarbonization in shipping and power generation	Industrial Machinery Division, Social Infrastructure Headquarters

For more on the external awards, please refer to:
› **External Awards** (P. 302)

Supply Chain Management

Basic Policy

Through the adoption of the Sustainable Development Goals (SDGs) and the Paris Agreement, the international community has called on companies to actively engage in actions to resolve global issues toward realizing a sustainable society. Existing harmoniously with the global environment, respecting human rights, and providing challenging work environments are some of the JFE Group's commitments in the JFE Standards of Business Conduct and the Group promotes initiatives under these standards. In order to realize a sustainable society, we believe it is important to address these challenges within the Group itself as well as across the entire supply chain. We will continue to push forward with our initiatives supported by the understanding of our suppliers and other business partners.

For risks and opportunities as well as Grievance mechanisms across the JFE Group's value chain, please refer to:
› **JFE Value Chain** (P. 28)
› **Grievance Mechanisms** (P. 215)

Promoting Green Procurement

The JFE Group's procurement policies help to conserve resources and protect the environment by ensuring adherence not only to all laws and regulations but also to procurement principles stated in the Charter of Corporate Behavior developed by the Japan Business Federation. Going forward, the JFE Group expects to accelerate such efforts in its supply chains.

Procurement Policy and Initiatives by Each Business

ST JFE Steel Procurement Guidelines and Requests to Suppliers to Promote Sustainability

In pursuit of a sustainable society, JFE Steel established the JFE Steel Procurement Guidelines in accordance with the JFE Group Standards of Conduct and the JFE Group Basic Policy on Human Rights. Under these guidelines, the company procures raw materials and equipment with due consideration for human rights, including the prohibition of child labor and forced labor, compliance with applicable laws, and environmental protection. In addition, we purchase raw materials such as tin, tantalum, tungsten, gold, and cobalt only after confirming that they have not been mined in conflict-affected or high-risk areas. We share these guidelines with our business partners and promote sustainability initiatives throughout our supply chain.

For the JFE Steel Procurement Guidelines, please refer to:
› **JFE Steel Procurement Guidelines** (https://www.jfe-steel.co.jp/en/company/pdf/procurement-guidelines.pdf)

EN Basic Procurement Policy, and Requests to Suppliers to Promote CSR

Viewing its suppliers as key partners in achieving mutual growth, JFE Engineering strives to nurture mutual trust and reinforce partnership relationships.

The company established the Basic Procurement Policy to implement fair and transparent procurement activities. Under our Procurement Guidelines, we also make specific requests to business partners and request their compliance. To ascertain the status of suppliers' efforts based on the request for compliance, we conduct a questionnaire survey. After reviewing the results, we follow up with suppliers that particularly require improvement, provide support materials to assist their improvement programs, and request corrective action.

Through these efforts, the company is developing CSR activities with its suppliers to promote sustainable procurement.

For JFE Engineering's Procurement Policy and Procurement Guidelines, please refer to:

› **Basic Procurement Policy** (https://www.jfe-eng.co.jp/en/information/procurement_policy.html)

› **Procurement Guidelines** (https://www.jfe-eng.co.jp/en/information/procurement_policy.html)

SH Ensuring a Sustainable Supply Chain

The JFE Shoji Group strives to be a prominent company that sustainably grows and develops alongside its customers, the JFE Group, and all other stakeholders. Recognizing that the key for achieving this goal is to ensure sustainability across the supply chain, JFE Shoji established the Basic Policy on Sustainability in the Supply Chain to guide its efforts on such issues as human rights, labor issues, and the global environment.

We seek the understanding and cooperation of our suppliers and other business partners in complying with the policy and will work with them to establish a more sustainable supply chain.

For JFE Shoji's Basic Policy on Sustainability in the Supply Chain, please refer to:

› **Basic Policy on Sustainability in the Supply Chain** (https://en.jfe-shoji.co.jp/corporate/principle/#section03)

Community

Basic Policy

We are engaged in corporate activities across the globe. Continuing to do business requires that we forge relationships of trust with local communities and realize sustainable growth together by contributing to the development of each region in which we operate as well as by pursuing development at manufacturing sites where our steelworks are located. To this end, the JFE Group is committed to working with communities as stated in the JFE Standards of Business Conduct and is promoting activities that contribute to local communities.

JFE Group Standards of Business Conduct and Priority Areas of Social Contribution Activities

❸ Work with communities
Actively contribute to host communities as a good corporate citizen by emphasizing harmony and cooperation.

These are the areas of social contribution on which the JFE Group is particularly focused in order to contribute to the development of local communities and society and how they relate to its businesses.

Areas of Focus	Connection to Business
Coexistence with local communities and society	We aim to deepen the understanding of our Group's business among the people in the regions where we conduct business, build trusting relationships with the local communities, and jointly promote regional development.
Environmental conservation	JFE Group's business has a significant impact on the environment, including greenhouse gas emissions. We are therefore committed to environmental conservation activities and strive to achieve sustainable growth.
Nurturing the next generation	The JFE Group contributes to the healthy upbringing of children and their growth by providing them with experiences in the regions where we operate. It also strives to nurture people who will contribute to the development of science, technology, and manufacturing.

The following are operating company policies regarding their social contribution activities.

ST Establishment of a System for Social Contribution Activities

In May 2026, JFE Steel established a new social contribution activity policy as part of its efforts to realize a sustainable society, designating three priority areas for social contribution: coexistence with local communities, environmental conservation and nature positive, and nurturing the next generation. It also established a slogan and logo for its social contribution activities.

JFE Steel's Social Contribution Activity Policy

With its corporate purpose, "Dream for your Future, Steel takes you Further" and the JFE Group Standards of Business Conduct, "3. Work with communities: Actively contribute to host communities as a good corporate citizen by emphasizing harmony and cooperation," JFE Steel will contribute to the realization of the "desired future" of stakeholders and the realization of a sustainable society by promoting social contribution activities, primarily in the regions where it conducts business, in addition to providing products, technologies, and services that meet society's needs.

Priority Fields

We have designated three areas that are highly compatible with our business strategy as priorities for social contribution activities.

1. Coexistence with Local Communities

We will build trusting relationships with the regions where we conduct business, including the areas surrounding our steelworks and manufacturing plants, and advance initiatives that meet the needs of each region, such as revitalizing local communities and supporting sports and culture, so that we can achieve sustainable growth together.

2. Environmental Conservation and Nature Positive

Through our business, we depend on and influence the blessings of nature. To pass on to future generations a natural environment that supports rich and fulfilling lives, we are committed to environmental conservation and activities that contribute to achieving nature-positive outcomes.

3. Nurturing the Next Generation

We contribute to the development of the next generation, who are essential for realizing a sustainable society. In particular, we take pride in our contribution to society through steelmaking that leverages our high level of technical expertise, and we provide support for nurturing those who will contribute to the development of science, technology, and manufacturing.

Logo and Slogan for Social Contribution Activities

未来に応(こた)えエール活動

JFE Steel's steelmaking is supported by the understanding and encouragement of local communities and society as a whole. Guided by our corporate purpose, "Dream for your Future, Steel takes you Further," we want to respond to people's wishes not just in steelmaking but in all aspects of our work. This includes coexisting with and revitalizing local communities, preserving and restoring the natural environment, and providing learning opportunities for the next generation, who will shape the future.
We also offer our support and encouragement to you.

For more information, please refer to:

› **JFE Steel's Social Contribution Activities (Japanese only)** (https://www.jfe-steel.co.jp/company/csr.html)

EN Establishment of a System for Promoting Social Coexistence Activities

In FY2022, JFE Engineering established the Social Co-existence Committee, chaired by the president, to strengthen its social initiatives and increase its contribution to realizing a sustainable society in accordance with the JFE Group Standards of Business Conduct. Under the policies set by JFE Engineering, the committee's activities encompass initiatives implemented through its businesses as well as efforts to address social issues that cannot be resolved through business operations alone. It identifies four priority themes: the environment, disaster prevention, local communities, and nurturing the next generation.

Four Priority Areas of Social Coexistence Activities



The environment and disaster prevention are closely related to the company's business domains.
Collaboration with local communities is essential for JFE Engineering, which does business in various locations.
Nurturing the next generation is in line with JFE Engineering's stated purpose of strongly supporting daily life and passing community strengths on to future generations.

In FY2025, the organizational structure was reorganized, and activities have continued under the Corporate Culture Enhancement Committee. Under the system, leaders have been assigned in each organization to promote activities across the company. Also, the company laid out guidelines for its system in order to create an environment conducive to its activities. In addition, it designed an original logo and selected a catchphrase from entries submitted by employees to spread awareness and promote employee participation.

みんなと創る
みんなで生きる

For more information, please refer to:
› **JFE Engineering's Social Contribution Activities** (https://www.jfe-eng.co.jp/information/en/social_coexistence/)

SH Establishment of a System for Social Contribution Activities

JFE Shoji has formalized its long-standing approach to engaging with society and its way of thinking about social contribution activities, and in March 2026, it established the Basic Policy on Social Contribution Activities.

JFE Shoji's Basic Policy for Social Contribution Activities

As a good corporate citizen, the JFE Shoji Group will work to address social issues, focusing on priority areas, in order to enrich the lives of people around the world, thereby contributing to building and developing a sustainable society.

Priority Areas

Environmental Conservation: We will work to improve environmental sustainability, including through action on climate change and biodiversity conservation.
Symbiotic Society: We will contribute to creating a society where everyone can live and thrive in their own way.
Next Generation Education: We will support the healthy development of children who will shape the future.

Initiatives

Our Group engages in social contribution activities, primarily in areas on which the JFE Group is particularly focused, in order to contribute to the development of society and local communities.

Furthermore, we provide paid leave programs to support employees' participation in volunteer activities.

> **Stakeholder Engagement** (P. 37)

ST EN Opening Manufacturing Sites to the Public

Coexistence with Local Communities and Society

Every year, the JFE Group opens its manufacturing facilities, inviting residents in local host communities to participate in demonstrations, tours, and other events.

On-Site Events in FY2025

	Location	Event	Date	Attendance
JFE Steel	East Japan Works, Keihin	Keihin Community Festival	May 25	21,000
	East Japan Works, Chiba	JFE Cherry Blossom Festival	April 5	6,000
		JFE Chiba Festival	October 26	10,000
	West Japan Works, Fukuyama	JFE West Japan Festival in Fukuyama	May 11	70,000
	West Japan Works, Kurashiki	JFE West Japan Festival in Kurashiki	November 3	20,000
	Chita Works	Handa Community Industrial Festival	November 8	11,000
	Sendai Works	JFE Steel Sendai Festival	October 4	3,000
JFE Engineering	Tsu Works	Autumn Festival	October 18	4,000



JFE West Japan Festival in Fukuyama

In addition, JFE Steel's recreational facilities are made available for community sports such as soccer, baseball, volleyball, and basketball, as well as other events. In FY2025, 22 tournaments were held with approximately 9,100 participants. Also, coaching sessions are offered by company baseball and track teams, which compete in Japan's top-level corporate leagues. In FY2025, 18 sessions were held with 1,100 participants, contributing to the promotion and development of sports in each region.

EN Contribution to Local Communities through the Engineering Business

Coexistence with Local Communities and Society

We contribute to realizing a circular economy in local communities by providing utility services, such as electricity, gas, and water, as well as combining our businesses in plastics and food recycling, renewable energy power generation, and waste-to-energy power generation.

- Establishment of a recycling value chain including collaboration with related companies and local governments
- Initiatives to promote plastic recycling (Sendai City, Kawasaki City)
- Horizontal recycling of PET bottles
- Food recycling (Sapporo City)
- Development of chemical recycling technology for waste materials, funded by the GI Fund
- Local power generation and supply (Iwata City, Tokorozawa City, etc.)
- Operation of waste-to-energy plants overseas

› **Initiatives for Transitioning to a Circular Economy** (P. 126)

EN Cleaning Activities at the Yokohama Head Office

Coexistence with Local Communities and Society

JFE Engineering emphasizes employee participation in its activities. In FY2025, it hosted a SpoGOMI event under the slogan "Picking up litter is a sport!" at its Yokohama Head Office as an activity that turns a community cleanup into a fun competition. About 60 employees took part, collecting roughly 100 kilograms of litter and contributing to the beautification of the surrounding area.

ST Tour of Steelworks

Coexistence with Local Communities and Society | Nurturing the Next Generation

Every year, JFE Steel invites approximately 90,000 guests, mostly elementary and junior high school students, from host communities to tour steel production sites at each steelworks, in conjunction with festivals and other events.

ST Education at Elementary Schools

Coexistence with Local Communities and Society | Nurturing the Next Generation

JFE Steel conducts plant tours for students at nearby elementary and junior high schools. In addition, company employees visit schools to give lectures on iron and steelmaking processes, the features of steelworks, environmental initiatives, and other topics to deepen understanding of the steel industry and career opportunities. In FY2025, these lectures were given to 1,010 students in 34 classes, bringing the total to about 369 classes since these began in FY2012.

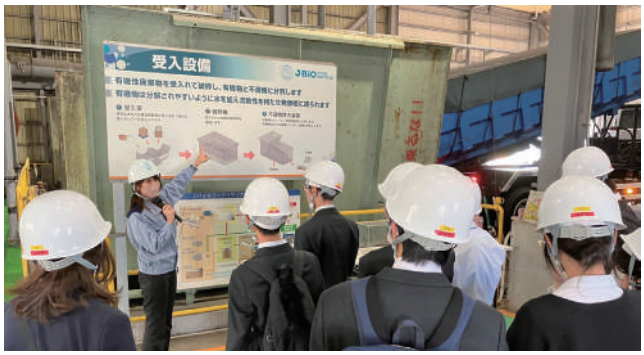


Kawasaki Middle School in Kawasaki City, Kanagawa Prefecture

EN Facility Tours and School Lectures

Coexistence with Local Communities and Society | Nurturing the Next Generation

JFE Engineering accepts visitors, mainly children from neighboring communities, and gives them tours of the works, construction sites, and incineration plants it manages under contract. The company also dispatches its employees to schools to provide lectures on the environment and other topics. For example, a lecture on the environment and recycling was given to around 80 second-year students at the Junior High School Attached to Yokohama Science Frontier High School near JFE Engineering's Yokohama Head Office, followed by a visit to the head office. Students learn through both classroom lectures and on-site experience by touring a food recycling plant operated by a Group company and the Global Remote Center, which remotely monitors over 80 incineration plants and other facilities in Japan and overseas. This initiative has been implemented for eight consecutive years since its launch in 2018.



Food recycling plant tour

EN Exhibiting at YOXO FESTIVAL 2026

Coexistence with Local Communities and Society | Nurturing the Next Generation

At the YOXO FESTIVAL 2026, organized by the Yokohama Future Organization (YOXO), volunteer employees collaborated to design and present "Experience the Job of Building Bridges," with the aim of making JFE Engineering's business more accessible.

EN Environmental Protection Activities in the Kumozu River Basin in Mie Prefecture

Coexistence with Local Communities and Society | Environmental Conservation

JFE Engineering is the founding member of a committee set up in 2008 for protecting the environment in the Kumozu River basin in Mie Prefecture, including Tsu City, where the company's Tsu Works is located. Together with the local forestry and fisheries cooperatives, which are also members, and with support from Tsu City, the committee conducts river cleanups and tree planting activities in the river basin, as well as beach cleanups at the mouth of the river and public environmental education, in which employees and their families participate.

EN Forest Management in the JFE Forest

Coexistence with Local Communities and Society | Environmental Conservation

JFE Engineering has concluded a forest maintenance agreement with the town of Yuni in Hokkaido, under the Hokkaido Government's Corporate Forest Development in Hokkaido program, and has been managing approximately 7 hectares of town-owned forest there. The purpose of this initiative is to conserve forests and revitalize the community through the proper maintenance and management of local forests. We named the forest where we carry out this initiative the JFE Forest, and in FY2025, we cut down 50-year-old trees that no longer effectively absorbed CO_2 and also planted clean larch seedlings, a tree species with high CO_2 absorption efficiency. In addition, an expert gave a lecture and a hands-on session to employees who participated in the tree-planting activities, providing them with an opportunity to deepen their understanding of forests. We will continue to carry out proper maintenance and management of forests.

ST EN SH Career Education for Students

Nurturing the Next Generation

JFE Steel and JFE Engineering provide plant tours for female junior high school, high school, and university students to encourage them to pursue careers in science and technology.

Since 2006, JFE Steel has participated in the Keizai Koho Center's Business Training for Japanese School Teachers. Teachers from primary, junior high, and high schools learn about business operations, human resource development, safety, and environment-protection-related initiatives, among other topics, with the intention of sharing that knowledge with their students and leveraging it for better school management. In addition, some facilities invite local junior high students and host work-experience sessions.

Kawasho Foods Corporation, a member of the JFE Shoji Group, collaborated with the NPO "Lion Heart" in October 2025 to hold a children's cafeteria event as a social contribution activity. Through this initiative, the company was able to convey to children the joy of food and working. The NPO works to eliminate disparities in opportunity for children through experiential activities such as company tours. In August 2026, with the cooperation of a partner warehouse company, the company conducted a warehouse and yard tour for children. We will continue to collaborate with the NPO to undertake initiatives in the future.



Business training for schoolteachers



Interaction activities at the Nukunuku children's cafeteria

ST EN SH FY2025 Internships

Nurturing the Next Generation

The JFE Group annually hosts many students, including trainees from overseas, to help them gain practical experience at plants as well as design and construction sites. They also participate in group work.

Number of Interns Accepted by Each Operating Company (FY2025)

JFE Steel	JFE Engineering	JFE Shoji
770 (administrative: 396, technical: 374)	754 (administrative: 165, technical: 589)	379

ST High School Science and Engineering Contest

Nurturing the Next Generation

The Japan Science & Engineering Challenge is a national science-paper contest for high school and technical college students. Under the sponsorship of the Asahi Shimbun Company and TV Asahi Corporation, the contest has been supported by JFE Steel since 2006 to nurture future scientists and engineers.



JFE Steel Award presented to students from Oita Uenogaoka High School in Oita Prefecture

SH Support for Elementary Schools in Ghana and Nigeria

Nurturing the Next Generation

The JFE Shoji Group has been conducting annual donation campaigns in Ghana and Nigeria since 2011. The donations take into account requests from the local ministries of education and schools, and the donated items are mainly selected to contribute to the economic activities of the two countries. In this 15th donation campaign, the JFE Shoji Group donated 12,500 cans of GEISHA brand canned mackerel with tomato sauce, 320 sets of desks and chairs, and 17,000 notebooks to a total of 15 schools in the two countries. School officials and local government agencies expressed many words of gratitude for the donations.

The JFE Shoji Group will continue to provide support for food and education into the future as a project that symbolizes the Group's commitment based on the JFE Shoji Group's basic policy for social contribution activities.



Presentation ceremony in Ghana



Presentation ceremony in Nigeria

SH Providing Workplace Training Opportunities for Students from Special-Needs Schools

Nurturing the Next Generation

The JFE Shoji Group has been hosting students from special-needs schools for off-campus training since FY2017. Training mainly consists of accepting interns to experience working in such jobs as cleaning, maintaining the tea dispenser, and sorting forms. In addition, bread sales training sessions led by students have been held 23 times since FY2021.

As a company that values open relationships with society, the JFE Shoji Group will continue to work with special-needs schools to help create a society where diverse people can thrive.

Support for External Organizations

Contributing to the realization of a sustainable society is a key management concern for the JFE Group, which actively seeks to address issues in collaboration with external groups and NGOs in pursuing solutions for the 17 SDGs.

Fund to Support Children's Future

Nurturing the Next Generation

The JFE Group endorses the Japanese government's national campaign for creating a society in which every child can grow with dreams and hopes. The Group supports the Fund to Support Children's Future, which provides assistance to NPOs and other groups engaged in activities to eliminate poverty throughout Japan.

For more information, please refer to:

> **National Movement to Support Children's Future (Japanese only)** (https://kodomonomiraiouen.cfa.go.jp/support/network)

UN World Food Programme

The JFE Group seeks to resolve the global hunger issue by supporting the cause and activities of the Japan Association for the World Food Programme*.

*An NPO-accredited supporter of the UN World Food Programme (WFP), which works to eliminate hunger and poverty

Japanese Foundation for Cancer Research

Since its establishment in 1908, the Japanese Foundation for Cancer Research has upheld its basic philosophy of aiming to improve the well-being of people everywhere by achieving better cancer control. The JFE Group supports this foundation, which has played a leading role in research and treatment as well as human resource development in Japan.

Supporting Training for Foreign Medical Professionals

The JFE Group supports the Japanese Council for Medical Training, spearheaded by the Toranomon Hospital in Tokyo. The council offers a training program in which doctors from developing countries, primarily in Southeast Asia, are invited to study in Japan. The program aims to make an international contribution by training participants in Japan's advanced medical practices so trainees can apply their results to raise the medical standards of their home countries and to foster stronger relationships between those nations and Japan. The program also contributes to resolving health issues in local communities by enhancing the medical standards of those countries.

For more information, please refer to:

> **JCMT** (https://www.jcmt.jp/english/)

JFE 21st Century Foundation

The JFE 21st Century Foundation was founded in 1990 through a donation from the JFE Group (the former Kawasaki Steel) to operate as a public-service corporation that contributes to society. It engages in various public services, such as supporting research at universities and cultural development.

- Issued technical research grants (steel-related technology, global environment, global warming mitigation technology)
- Issued grants for Asian historical research

- Published and donated textbooks for universities and publications related to steel
- Sponsored cultural activities in communities hosting steel facilities
- Sponsored a writing contest for overseas students and donated anthologies

For more on the JFE 21st Century Foundation, please refer to:

› **JFE 21st Century Foundation** (http://www.jfe-21st-cf.or.jp/eng/)

› **Social Data: JFE 21st Century Foundation** (P. 291)

Support for Technology Research

The foundation has been highly acclaimed by many universities for its support of technology research since FY1991.

In FY2025, it fielded 144 grant requests and provided a total of 56 million yen in the form of grants valued at 2 million yen each for 8 projects involving iron and steel technologies and 20 projects related to environmental technologies, including global warming mitigation technologies.

Support for Asian History Studies

The foundation began awarding grants in support of Asian history studies at Japanese universities in FY2005. In FY2025, 96 applications were received and 12 grants worth 1.5 million yen each were awarded, bringing the total to 18 million yen.

Support Activities in Communities Hosting Steel Facilities

The foundation financially sponsors community cultural activities including music, art, traditional events, community revitalization, community activities, and the conservation of cultural property.

In FY2025, it sponsored 16 events in regions across Japan where the Group operates its steel business, including Chiba, Kawasaki, Kurashiki, Fukuyama, Handa, and Sendai cities.

Supporting the Japan Overseas Educational Services Writing Contest and Anthology Donation

The Japan Overseas Educational Services organizes contests in the areas of essays, poems, tanka and haiku for Japanese students attending elementary and middle schools overseas. The JFE Group has been cosponsoring the contest by offering JFE 21st Century Foundation prizes since FY1991. The foundation also donated 2,000 copies of Chikyu ni Manabu (Learn from the Earth), a collection of the winning entries, again in FY2025, to approximately 700 organizations, including elementary and middle schools and public libraries located in the regions where the Group operates its steel business.

List of Social-Contribution Activities

Coexistence with Local Communities and Society

› **Kurashiki—Plant tours**
(https://www.jfe-steel.co.jp/en/company/csr.html#anc01-01)

› **Keihin and Kurashiki—Donated disaster relief supplies to food banks and social welfare councils**
(https://www.jfe-steel.co.jp/en/company/csr.html#anc01-03)

› **Sendai, Kurashiki, and Fukuyama—Joined local cleanup activities**
(https://www.jfe-steel.co.jp/en/company/csr.html#anc01-05)

› **Safety and Health Department—Implemented and promoted Active Exercise™ and Safe Physical Fitness™ Functional Test (Japanese only)**
(https://www.jfe-steel.co.jp/company/csr.html#anc01-07)

› **Held festivals and events**
(https://www.jfe-steel.co.jp/en/company/csr.html#anc01-02)

› **Lectured at elementary and junior high schools**
(https://www.jfe-steel.co.jp/en/company/csr.html#anc01-04)

› **Chiba, Nishinomiya, Keihin, Kurashiki, Fukuyama, and Chita—Collaboration with local governments (Japanese only)**
(https://www.jfe-steel.co.jp/company/csr.html#anc01-06)

› **Launched on-site daycare centers for local residents (Japanese only)**
(https://www.jfe-steel.co.jp/company/csr.html#anc01-08)

> **Held local sporting events**
(https://www.jfe-steel.co.jp/en/company/csr.html#anc02-01)

> **Chita—Held a manufacturing class for children**
(https://www.jfe-steel.co.jp/en/company/csr.html#anc01-11)

> **Sponsored the Cho Chikun Go Cup**
(https://www.jfe-steel.co.jp/en/company/csr.html#anc02-03)

> **Kurashiki—Organized on-premises blood donation campaigns (Japanese only)**
(https://www.jfe-steel.co.jp/company/csr.html#anc01-10)

> **Fukuyama—Donation for Fukuyama Castle 400th Anniversary Project**
(https://www.jfe-steel.co.jp/en/company/csr.html)

> **Keihin Symphonic Band gave performances**
(https://www.jfe-steel.co.jp/en/company/csr.html#anc02-05)

- Supported local festivals
- Opened "Dragonfly Street" and Station Square to the public
- Joined the Where Do Dragonflies Fly Forum
- Supported the Tsurumi Line stamp rally
- Volunteered for the Kasumigaura Marathon
- Volunteered for disaster reconstruction
- Organized in-house fairs for supporting post-disaster reconstruction in Fukushima (providing meals at a cafeteria using local ingredients)
- Participated in tree-planting to invigorate a rainforest in the Philippines
- Organized environmental events at a contracted incineration plant
- Keihin—Hosted plant tours, the Fureai Festival, and the Rikochallenge Summer of 2025 (in collaboration with JFE Engineering)
- Comprehensive collaboration agreement between Chiba City and East Japan Works (Chiba District)

> **Initiatives for Transitioning to a Circular Economy** (P. 126)

Nurturing the Next Generation

> **Supporting technician education at universities in Vietnam**
(https://www.jfe-steel.co.jp/en/company/csr.html)

> **Supported the Japan Science & Engineering Challenge for high school and technical college students**
(https://www.jfe-steel.co.jp/en/company/csr.html#anc03-03)

> **Accepted teachers for private-sector training**
(https://www.jfe-steel.co.jp/en/company/csr.html#anc03-06)

> **Baseball and track clubs held instructional classes**
(https://www.jfe-steel.co.jp/en/company/csr.html#anc02-02)

> **Organized internships**
(https://www.jfe-steel.co.jp/en/company/csr.html#anc03-02)

> **Supported career education**
(https://www.jfe-steel.co.jp/en/company/csr.html#anc03-05)

> **Held Rikochallenge workplace tours (Japanese only)**
(https://www.jfe-steel.co.jp/company/csr.html#anc03-06)

- Supported the Welfare and Medical Service Agency's Children's Future Support Fund
- Certified as a company supporting child rearing (Kanagawa Prefecture and Nagoya City)
- Accepted foreign technical interns (welding training)
- Support for elementary schools in Ghana and Nigeria
- Supported off-campus training by a special-needs school
- Supported a robotics competition for high schools in Mie Prefecture
- Provided welding training for technical high school teachers
- Support for the Hilltop Children's Cafeteria in Komaoka

Environmental Protection

- **Constructed a biotope at the Chita Works site (Japanese only)**
  (https://www.jfe-steel.co.jp/company/csr.html#anc04-01)
- **Biotope Chita certified as a Nature Coexistence Site**
  (https://www.jfe-steel.co.jp/company/csr.html#anc02-03)
- **Keihin—Exhibited at the Kawasaki International Eco-Tech Fair**
  (https://www.kawasaki-eco-tech.jp/en/)
- **Forest maintenance in the JFE Forest (Japanese only)**
  (https://www.jfe-eng.co.jp/information/social_coexistence/topics_forest/)
- **Chita Works certified as an Aichi Biodiversity Certified Company (Japanese only)**
  (https://www.jfe-steel.co.jp/company/csr.html#anc02-02)
- **Exhibited at environmental exhibitions and events (Japanese only)**
  (https://www.jfe-steel.co.jp/company/csr.html#anc02-04)
- **Use of steel slag (Japanese only)**
  (https://www.jfe-steel.co.jp/company/csr.html#anc02-05)

- Donated PET bottle caps
- Cooperated with nonprofit Green Bird in volunteer garbage collection

Others

- Supported the Japan Association for the World Food Programme
- Supported Japanese Foundation for Cancer Research
- Supported the Japanese Council for Medical Training

Governance: Executive Summary

With its many companies and partners, the JFE Group is engaged in a broad and diverse range of businesses, centered on the steel, engineering, and trading businesses.

Establishing a proper governance system is essential for increasing the autonomy and efficiency of each operating company and for appropriately managing various business risks, including those related to the environment, safety, and disaster prevention. It is also important for ensuring the Group's sustainable growth and improving corporate value over the medium to long term.

We have been enhancing corporate governance through such initiatives as formulating the Basic Policy on Corporate Governance, establishing the Nomination Committee and Remuneration Committee, and evaluating the effectiveness of the Board of Directors.

Upon approval of the Ordinary General Meeting of Shareholders held in June 2025, the Company transitioned to a company with an Audit & Supervisory Committee. In April 2026, we reviewed the standards for agenda items for meetings of the Board of Directors and how those meetings were conducted while also strengthening governance frameworks.

In line with the launch of the Eighth Medium-term Business Plan, we revised the remuneration system for Directors. To increase the proportion of performance-linked remuneration, the ratio of basic remuneration, annual bonus, and stock remuneration was set at 2:1:1. For bonuses, in addition to financial performance, we adopted employee safety, climate change, and employee engagement indicators as ESG indicators. For stock remuneration, we adopted return on equity (ROE) and relative total shareholder return (TSR) as performance indicators.

Thorough compliance is the foundation of our relationship of trust with stakeholders and the basis of our business activities. We strive to ensure adherence to corporate ethics and compliance as a material issue of management, and we established the JFE Group's Basic Policy on Compliance in April 2026. We also appointed Chief Compliance Officers (CCOs) at JFE Holdings and each operating company to clarify accountability, thereby strengthening the compliance framework.

The JFE Group Compliance Committee, chaired by the CCO, supervises and provides guidance on compliance efforts, and important measures are reported to and deliberated by the Board of Directors for direction and supervision.

With regard to risk management, JFE Holdings as the holding company is responsible for the comprehensive risk management of the Group and has established a system under which its Board of Directors supervises risk management and confirms its effectiveness. JFE Holdings is continuously improving risk management for the entire Group based on discussions by its Board of Directors.

Objectives and results related to material issues of corporate management concerning governance

› **FY2025 KPI Results and FY2026 KPIs** (P. 19)

Key Initiatives

- **In line with the launch of the Eighth Medium-term Business Plan, we revised the remuneration system for Directors** (P. 256)
- Conducting third-party **analysis and evaluation of the Board of Directors' effectiveness** (P. 255)
- Disclosure of **skills matrix** for Directors (P. 251)
- **Corporate Ethics Awareness Survey** implemented periodically for officers and employees of JFE Holdings and operating companies (P. 267)
- Ongoing **oversight and confirmation of the effectiveness of Groupwide risk assessment by the Board of Directors** (P. 269)
- **Appointment of CCOs at JFE Holdings and its operating companies, and CFOs and CTOs at operating companies,** to strengthen the governance framework (P. 250)

Corporate Governance

Basic Policy

With the steel business, engineering business and trading business at its core, the JFE Group develops a broad range of businesses in a wide range of areas together with many group companies and partners. Establishing a proper governance system is essential toward improving independence and raising efficiency in each operating company, along with the optimal management of risks, which include those related to the environment, safety, and disaster prevention in the Group. It is also necessary for the sustainable growth of the Group and the medium- to long-term improvement of its corporate value.

With the aim of enhancing the best corporate governance to embody the JFE Groups' Corporate Vision, the Company has established the JFE Holdings Basic Policy on Corporate Governance. The Company has revised the policy pursuant to its transition to a company with an Audit & Supervisory Committee, as approved at the Ordinary General Meeting of Shareholders held in June 2025.

> **JFE Holdings, Inc. Basic Policy on Corporate Governance** (https://www.jfe-holdings.co.jp/en/common/pdf/company/info/basic-policy.pdf)
> **Corporate Governance Report** (https://www.jfe-holdings.co.jp/en/common/pdf/company/info/corporate-governance.pdf)

Systems and Initiatives

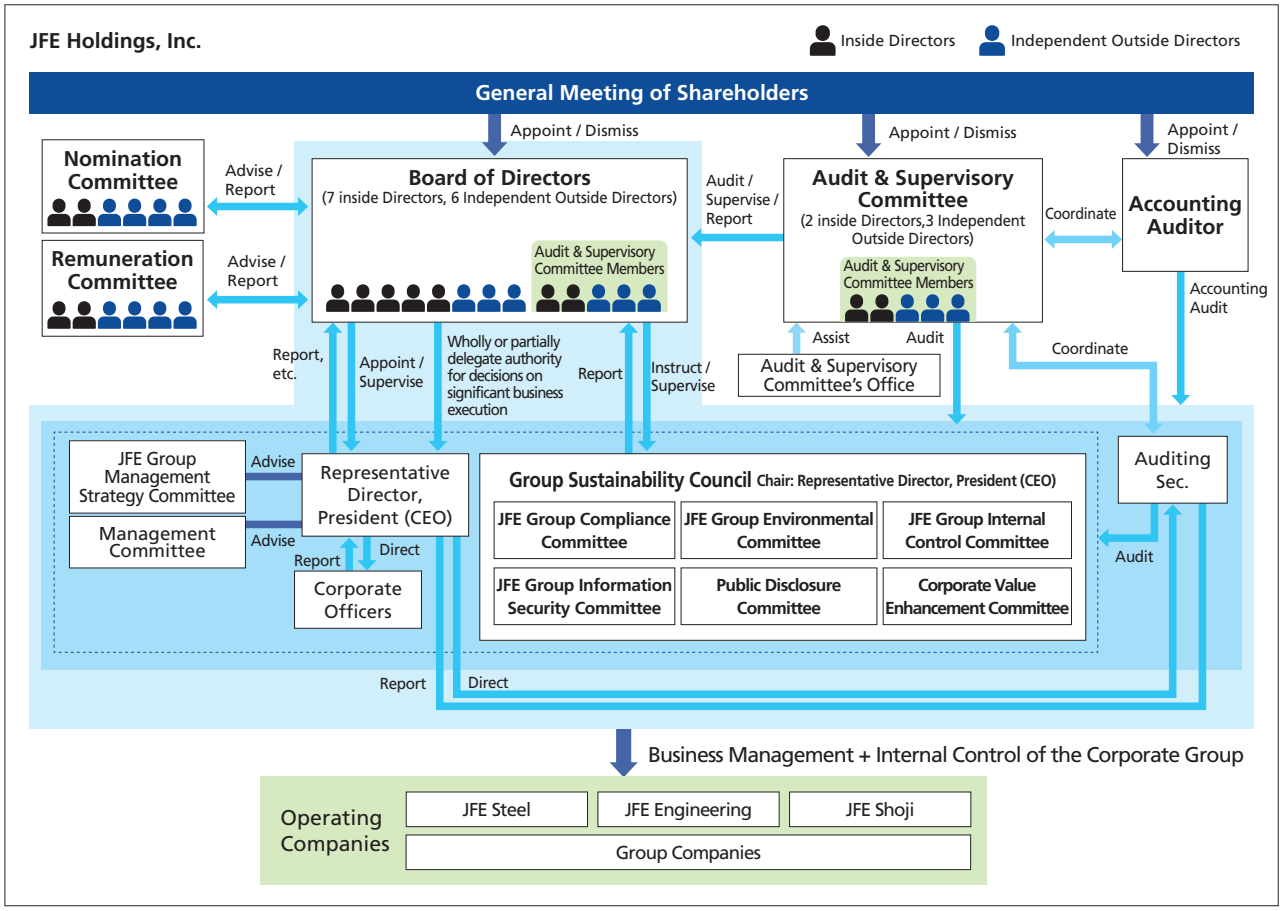
Corporate Governance System

Group Governance System

The JFE Group comprises a holding company and three operating companies, JFE Steel, JFE Engineering, and JFE Shoji.

JFE Holdings, a pure holding company at the core of the Group's integrated governance system, guides Groupwide strategy, risk management, and public accountability.

Each operating company has developed its own system suited to its respective industry, ensuring the best course of action for competitiveness and profitability.

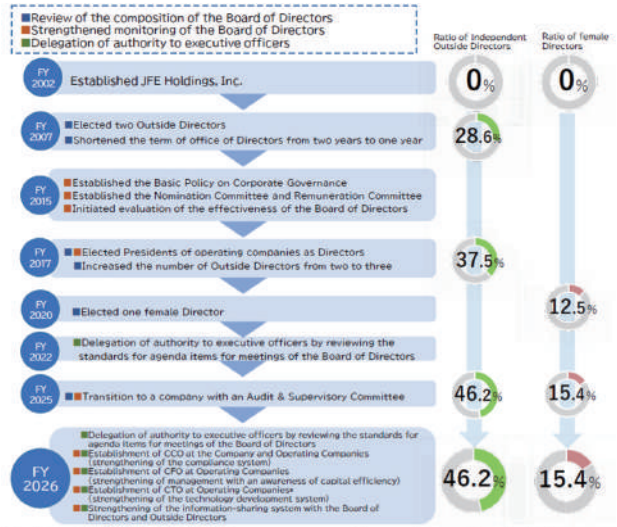


› Governance Data (P. 292)

Governance System

The Company has constructed the following corporate governance system aimed at continuously increasing corporate value and the common interest of shareholders by reinforcing the fairness, objectivity and transparency of management. Upon approval of the Ordinary General Meeting of Shareholders held in June 2025, the Company transitioned to a company with an Audit & Supervisory Committee to accelerate decision-making, enhance discussions of management policies and strategies, and further strengthen the supervisory function of the Board of Directors. In April 2026, we reviewed the standards for agenda items for meetings of the Board of Directors and how those standards are applied. We are also working to strengthen the compliance system, management focused on capital efficiency, and the technology development system.

Major Initiatives to Strengthen the Governance System



Further strengthen corporate governance through speedier decision-making and more effective supervision to achieve sustainable growth and enhance corporate value

Strengthening the Compliance System

To ensure thorough compliance, we appointed and designated Chief Compliance Officers (CCOs) at JFE Holdings and its operating companies to be responsible for promoting compliance measures and responding to serious compliance incidents. Particularly serious compliance incidents are promptly reported to the Board of Directors, which provides oversight.

Strengthening Management Focused on Capital Efficiency

The Chief Financial Officer (CFO) of JFE Holdings has promoted management focused on capital efficiency while balancing growth investments with financial discipline. We appointed CFOs at the operating companies to further advance management focused on capital efficiency. These CFOs deliberate on the business environment, profitability, risk assessment, and other aspects of investment proposals, while the CFO of JFE Holdings reviews those proposals for consistency with Groupwide strategy and the Medium-term Business Plan. This robust framework, comprising the CFO of JFE Holdings and the CFOs of the operating companies, will lead to enhanced corporate value.

Strengthening the Technology Development System

To further pursue value-creating technology development by more closely aligning that development with management strategy, we appointed Chief Technology Officers (CTOs) at JFE Steel and JFE Engineering and strengthened the execution system for technology development.

Duties of the Board of Directors and other Bodies

Appointment of Independent Outside Directors

The Company appoints several Independent Outside Directors, ensuring that they make up at least one-third of the Board. Candidates for Independent Outside Director are elected from individuals capable of strengthening corporate governance, such as those with extensive management experience in global enterprises or experts with deep professional knowledge, and who meet the Company's Standards for Independence of Outside Directors. As of July 1, 2026, 6 of the 13 Directors are Independent Outside Directors.

The Company elects several Independent Outside Directors who are Audit & Supervisory Committee Members. Independent Outside Directors who are Audit & Supervisory Committee Members will be elected from persons who are appropriate to bear the role of enhancing auditing function such as those who possess abundant experience as management in global enterprises or experts who possess profound knowledge, and meet the Company's Standards for Independence of Outside Directors. As of July 1, 2026, of the five Audit & Supervisory Committee Members, three are Independent Outside Directors who are Audit & Supervisory Committee Members.

› **Standards for Independence of Outside Directors of JFE Holdings, Inc.** (https://www.jfe-holdings.co.jp/en/common/pdf/company/info/independence.pdf)
› **Governance Data: Directors** (P. 293)

Approach to Diversity in the Board of Directors

With regard to the composition of the Board of Directors, the Company elects officers following deliberations by the Nomination Committee by focusing on the enhancement of diversity of the Board members, such as their expertise, knowledge and experience in various fields, while balancing with the appropriate size of the Board. The Company also elects Directors who possess a wealth of knowledge and experience as management in global enterprises. In this way, the Company is working to enhance gender and global diversity. As of July 1, 2026, two female Directors are in office. The Company will continue to systematically engage in initiatives to foster such human resources suitable for candidates for Directors by setting specific targets.

Skill Matrix of Directors

We have established the JFE Holdings, Inc. Basic Policy on Corporate Governance for promoting sustainable growth of JFE Holdings, Inc. and the JFE Group, the medium- to long-term improvement of corporate value, and expressing concretely the JFE Group's Corporate Vision of pursuing best practices in corporate governance and achieving further development in this area. With regard to the composition of the Board of Directors, we strive to enhance the diversity of the Board members, such as their expertise, knowledge, and experience in various fields, and identify necessary skills of corporate management in light of our business and corporate management issues of the Company and the Operating Companies. The Company selects candidates for officers following deliberations by the Nomination Committee while balancing with the appropriate size of the Board.

The skills matrix for each Director against identified skills in light of their knowledge, experience, and expertise are summarized below.

		Name	Corporate Management and Management Strategy	Sustainability and Environment	Technology and DX	Finance and Accounting	Internal Control and Governance	Legal Affairs Compliance	Personnel and Labor, Human Resources Development	Sales and Marketing	Operation with knowledge
Directors	Inside	Yoshihisa Kitano	●	●	●		●		●		Steel
		Masayuki Hirose	●	●			●			●	Steel
		Toshihiro Tanaka	●	●	●	●	●	●			Steel, Engineering, Trading
		Kazuyoshi Fukuda	●	●	●		●			●	Engineering
		Yoshifumi Ubagai	●	●			●			●	Steel, Trading
	Outside	Yoshiko Ando		●			●	●	●		—
		Takuya Shimamura	●	●			●		●	●	—
		Keiichi Kobayashi	●	●	●		●			●	—
Directors who are Audit & Supervisory Committee Members	Inside	Nobuya Hara	●			●	●				Steel
		Nakaba Akimoto					●	●			Steel, Engineering, Trading
	Outside	Tsuyoshi Numagami	●			●	●			●	—
		Yoshihisa Suzuki	●	●	●		●		●	●	—
		Naoto Nakamura	●				●	●			—

(As of June 25, 2026)

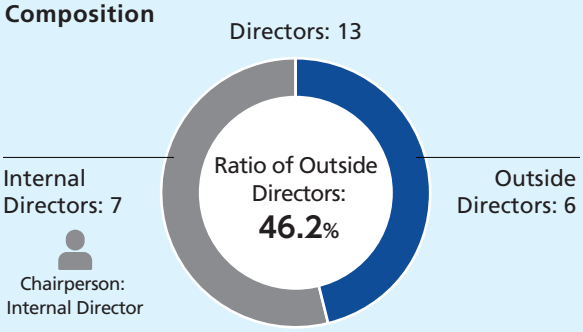
Main Responsibilities and FY2025 Activities of the Board of Directors and Audit & Supervisory Committee

Board of Directors Meetings held: 15 Attendance rate: 99.6%

Main Responsibilities and Roles

- Responsible for the Company's sustainable growth and enhancing mid- to long-term corporate value
- Makes important management decisions, including those concerning the JFE Group's management plans and fundamental management policies
- Supervises overall management, including the execution of duties by executive officers

Composition



Major Topics Discussed in FY2025

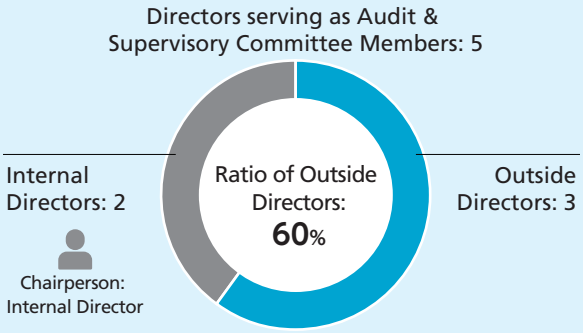
- Establishment of JFE Vision 2035 and the Eighth Medium-term Business Plan
- Progress of the Eighth Medium-term Business Plan
- Large-scale investments (e.g., expanding the manufacturing capacity of JSW JFE Electrical Steel Nashik Private Limited, establishing an integrated steel plant joint venture with JSW Steel Limited) and follow-up on investments
- Initiatives to address sustainability issues (e.g., efforts to achieve carbon neutrality, strengthening the corporate governance and compliance systems)

Audit & Supervisory Committee Meetings held: 14 Attendance rate: 100%

Main Responsibilities and Roles

- As an independent body of the Company, the Audit & Supervisory Committee audits the execution of duties by Directors, thereby contributing to the Company's sound and sustainable growth and the enhancement of public trust in the Company
- Audit & Supervisory Committee Members endeavor to share material information obtained in the course of their duties with other Committee Members through the Committee and ensure the appropriateness of audits by exchanging views with Committee Members

Composition



Major Activities

- Receives reports from Directors, Executive Officers, employees, and other relevant parties, and exchanges opinions with Representative Directors
- Attends important meetings and conducts on-site audits and inspections, including site visits
- Coordinates with the Accounting Auditor and the Internal Audit Department
- Forms opinions on the appointment and dismissal of Directors, their remuneration, and other related matters

For more on the governance data, please refer to the following information.
› Governance Data (P. 292)

Nomination and Remuneration Committees: FY2025 Activities

JFE Holdings has maintained the Nomination Committee as well as the Remuneration Committee, which acts as an advisory body of the Board of Directors to ensure fair, objective, and transparent personnel affairs and remuneration of the Board of Directors. Both committees are composed of a majority of Outside Directors, and their chairpersons are elected from among Outside Directors.

Nomination Committee Meetings held: 3 Attendance rate: 100%

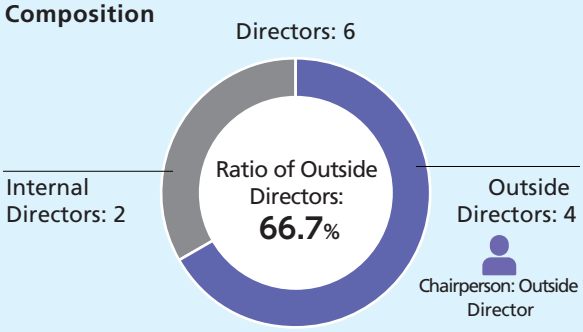
Main Responsibilities and Roles

As an advisory body to the Board of Directors, the Nomination Committee submits recommendations to the Board in order to ensure fairness, objectivity, and transparency in personnel matters concerning Directors and other officers.

Main Activities

Deliberation on the basic policy for the appointment and dismissal of the President; draft proposals for the selection of candidates for President; the President's succession plan; and matters concerning the nomination of candidates for Outside Directors

Composition



Remuneration Committee Meetings held: 5 Attendance rate: 100%

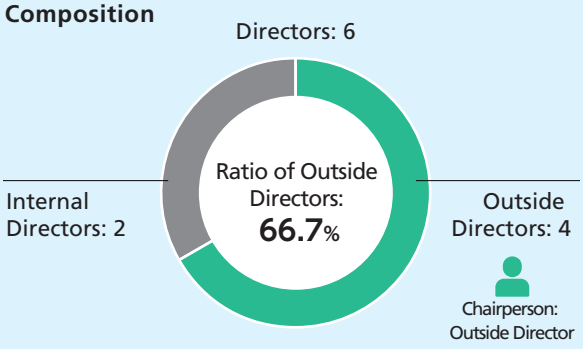
Main Responsibilities and Roles

As an advisory body to the Board of Directors, the Remuneration Committee submits recommendations to the Board to secure fairness, objectivity, and transparency in matters concerning the remuneration of Directors and other officers.

Main Activities

Deliberation on matters pertaining to the basic policy on the remuneration of Directors of the Company and its operating companies, including the appropriateness of remuneration levels, remuneration composition, and the indicators and calculations used for performance-linked remuneration.

Composition



› Governance Data: Nomination Committee and Remuneration Committee (P. 294)

Support for Directors

A Board of Directors' Secretariat is set up in the General Administration Dept. to support Outside Directors with necessary communication and arrangements, etc. Furthermore, dedicated staff to support the duties of the Audit & Supervisory Committee, which is composed primarily of Outside Directors who are Audit & Supervisory Committee Members, are allocated in the Audit & Supervisory Committee's Office.

Directors are provided, both upon appointment and on an ongoing basis, with opportunities and funding to receive training tailored to each individual Director in legal matters, corporate governance, risk management, and other subjects that help them fulfill their roles and duties.

In addition, the Company provides Outside Directors with briefings, etc., prior to the Board of Directors meetings and gives materials and explanations on each agenda item.

The Company strives to provide adequate information necessary for the execution of their duties by sharing materials for the Company's Management Council and other meetings, providing explanations on important management issues of the Company and Group companies from time to time, and offering opportunities such as exchanges of opinions with the senior management, including the President. This includes attendance at hearings on important business matters reported by each department as necessary, convening Board of Directors meetings at major business bases, and inspections of Group companies. In addition, meetings exclusively for Outside Directors serve as venues for freely exchanging information from an independent, objective standpoint.

FY2025 Results

Board of Directors Briefings 14

Board of Directors meetings convened at major business bases: 2

- JFE Steel East Japan Steelworks (Keihin district)
- JFE Steel West Japan Steelworks (Fukuyama district)

Meetings attended exclusively by Outside Directors: 4

(2 meetings included exchanges of opinions with the executive management)

Tours of major business bases and Group Companies

- JFE Steel East Japan Steelworks (Keihin district)
- JFE Steel West Japan Steelworks (Fukuyama district)
- JFE Engineering's Kasaoka Monopile Factory
- Studco's metallurgical coal mine in Australia



JFE Engineering's Kasaoka Monopile Factory

Training for Directors

- JFE Group overview, Medium-term Business Plan progress status, financial status, management issues (newly appointed Outside Directors)
- Training on green transformation (GX)-related policies and the JFE Group's initiatives (all Directors; FY2026)

Information Provision to Outside Directors

- Materials for Management Council and Group Management Strategy Committee meetings, as well as discussion summaries (FY2026)
- Macroeconomic overview and overview of steel supply and demand
- Monthly profit and loss results
- Analyst Report
- Other topics (e.g., publication of the JFE Group Report and Sustainability Report; participation in exhibitions; status and content of business briefings held by operating companies; status of and key topics raised in meetings with institutional investors; and status and content of analyst site visits and small meetings)

Analysis and Evaluation of the Effectiveness of the Board of Directors

In line with the Basic Policy on Corporate Governance, the Board of Directors has been evaluating the overall effectiveness of the Board since FY2015 and has been conducting analysis and evaluation using a third-party organization to incorporate an objective standpoint independent from the Company since FY2018.

In FY2025, the Company also conducted a questionnaire survey of all Directors covering the following matters. In addition, the Company assessed the results of the initiatives implemented in FY2025 based on the opinions and recommendations obtained through the analysis and evaluation conducted in FY2024.

Main Content of the Questionnaire

I. Operational framework for the Board of Directors
(Composition and operations of the Board of Directors, support and cooperation framework of the Secretariat, and culture)
II. Supervision function of the Board of Directors and functions of the advisory committees
(Supervision function and status of discussions at the Board of Directors, status of discussions at the advisory committees, etc.)
III. Relationships with shareholders and stakeholders

After discussing its effectiveness based on the questionnaire and the evaluation by the third-party organization, the Board of Directors determined that the overall effectiveness of the Board was ensured through robust discussions among members, supported by substantial preliminary briefings at meetings for Outside Directors and Audit & Supervisory Board Members, as well as appropriate management and leadership by the chairperson, which encouraged active participation by Directors.

Issues Identified in the Evaluation of Effectiveness for FY2024

- Following the transition to a Company with an Audit & Supervisory Committee, further discussions should focus on the ideal structure of the Board of Directors, including appropriately delegating authority to executive management and the size and diversity of the Board
- Deeper discussions should be held continually, not only on material management issues such as human capital management and initiatives to respect human rights, but also on the analysis of market evaluations and measures for improvement
- To further strengthen risk management across the entire Group, reporting to the Board of Directors on risk information, including information of subsidiaries and affiliates, should be enhanced

Initiatives in FY2025 Based on the Results of the Effectiveness Evaluation through FY2024

- Following the transition to a Company with an Audit & Supervisory Committee, the Board of Directors discussed the ideal structure of Group management and reviewed the criteria for matters to be submitted to the Board of Directors and its operations, with the aim of accelerating decision-making and further enhancing strategic discussions
- The Company increased the frequency of meetings for Outside Directors, which had previously been held on an ongoing basis. In addition, Outside Directors requested that executive members participate in these meetings as necessary to share information and exchange opinions on material management issues, the analysis of market evaluation, and initiatives for improvement, and these efforts stimulated lively discussions at meetings of the Board of Directors
- The Company established the JFE Group Basic Policy on Compliance and designated Chief Compliance Officer (CCO) positions at the Company and each operating company to clarify accountability and strengthen the compliance system

Issues for FY2026

- Following the transition to a company with an Audit & Supervisory Committee, the Board of Directors should confirm the effectiveness of its revised operations and continue discussion on its optimal structure, including its size and composition, to achieve further improvement
- To realize medium- to long-term management strategies, the Board of Directors should further enhance discussions on consistency with plans and capital efficiency, as well as discussions aimed at analyzing and improving the Company's market valuation
- To improve the effectiveness of the internal audit function, the Board of Directors should continue discussions on the role and structure of internal auditing

Taking into account the issues identified, initiatives will be proactively undertaken to further increase the effectiveness of the Board of Directors and enhance the corporate value of the Group.

Operating System

Key Decision-Making

With regard to significant matters at each company within the Group, internal rules define clear standards and procedures for decision-making. Significant matters concerning overall Group management are ultimately deliberated and decided by JFE Holdings, Inc. Each Operating Company determines important matters related to itself and its subsidiaries through its Board of Directors and Management Committee. At JFE Holdings, Inc., the JFE Group Management Strategy Committee deliberates on significant matters concerning management strategies for the entire Group, while the Management Committee considers specific significant matters related to the Company, the Operating Companies, or Group Companies. Based on these deliberations, the Board of Directors makes final decisions on significant matters. Following the transition to a Company with an Audit & Supervisory Committee in FY2025, the Company is promoting the delegation of authority to executive management and initiatives to strengthen the Board of Directors' supervisory function.

› **Governance Data: Operating System** (P. 294)

Executive Remuneration

Executive remuneration is based on the Basic Policy on Remuneration for Directors and Corporate Officers and the Policy for Deciding the Individual Remuneration for Directors and Corporate Officers founded on discussions and reports by the Remuneration Committee, and it is decided through either a resolution of the Board of Directors or deliberations by the Directors who are Audit & Supervisory Committee Board Members, for an amount within the total limit approved at the General Meeting of Shareholders.

Basic Policy on Remuneration for Directors and Corporate Officers

- The Board of Directors (excluding members of the Audit & Supervisory Committee; hereinafter the same) shall determine the remuneration system for Directors and Corporate Officers based on deliberations regarding its appropriateness by the Remuneration Committee to ensure fairness, objectiveness, and transparency
- The remuneration level for Directors and Corporate Officers shall be determined to secure excellent human resources who are able to put the Group's corporate vision into practice, taking into consideration the business environment of the Group and remuneration levels at other companies in the same industry or of the same scale
- The ratio between basic remuneration and performance-linked remuneration (annual bonus and stock remuneration) shall be properly established according to the roles and responsibilities, etc., of each Director and Corporate Officer so as to function as sound incentives toward the sustainable growth of the Group

Outline of Policy for Deciding the Individual Remuneration for Directors and Corporate Officers

- Remuneration for Directors (excluding members of the Audit & Supervisory Committee; hereinafter the same) and Corporate Officers shall be determined by a resolution of the Board of Directors in accordance with the Basic Policy and the Decision Policy, based on reports from the Remuneration Committee
- Remuneration for the Directors and Corporate Officers is comprised of basic remuneration and performance-linked remuneration (annual bonus and stock remuneration)
- Basic remuneration is paid as a fixed amount, in cash, each month according to position
- An annual bonus is linked to the Company's single-year performance (calculated based on financial and non- financial indicators) and is paid in cash once a year
- Stock remuneration is granted as the Company's shares and cash equivalent to the amount of the Company's shares converted to market value through the trust upon retirement
- The ratios of remuneration by type are structured so that the higher the position, the greater the weight of performance-linked remuneration, and the ratio for the Company's President when performance target goals have been attained is set so that the ratio of basic remuneration, annual bonus and stock remuneration stands at 2:1:1

The Company pays only basic remuneration to Outside Directors and the Directors who are Audit & Supervisory Committee Members, given their roles of supervising and auditing management from an independent and objective standpoint. Directors who concurrently serve as Executive Directors of operating companies shall not be paid the annual bonus or the Stock Remuneration from the Company.

Furthermore, the calculation method for performance-linked remuneration, as described below, has been revised from FY2025 based on the Eighth Medium-term Business Plan.

Annual Bonus

The annual bonus is a remuneration package linked to both financial and ESG performance based on fiscal year results. Financial performance is measured by the total segment profit for a single fiscal year. ESG performance is assessed using the following indicators: employee safety (lost-workday injury rates, with 0% for a fatal accident), climate change (achievement of KPIs related to "Initiatives to Address Climate Change Issues"), and employee engagement (achievement of KPIs related to Enhancement of Job Satisfaction under Promotion of Human Capital Management). When the achievement rate for all targets is 100%, the weighting of annual bonus components for financial performance, employee safety, climate change, and employee engagement stands at 8:1:1:1.

The individual remuneration amount is determined by multiplying the base amount set for each position by the level of achievement for each selected performance-linked indicator. Directors and Corporate Officers who have been dismissed or have committed certain types of misconduct may lose the right to receive benefits based on a resolution of the Board of Directors. Directors and Corporate Officers who have already received benefits may be asked to return the amount based on a resolution of the Board of Directors if they engage in certain types of misconduct.

Stock Remuneration

Under the stock remuneration plan, a payment level is determined based on performance targets set in the Group's Medium-term Business Plan, etc. From FY2025, to further promote value sharing with shareholders and increase awareness of contributing to the improvement of medium- to long-term corporate value, we have selected the target values for ROE (10% or more), as set forth in the Eighth Medium-term Business Plan, and relative TSR (1 or higher) as performance indicators for the performance-linked portion. The level of payment is based on the degree of achievement of each indicator.

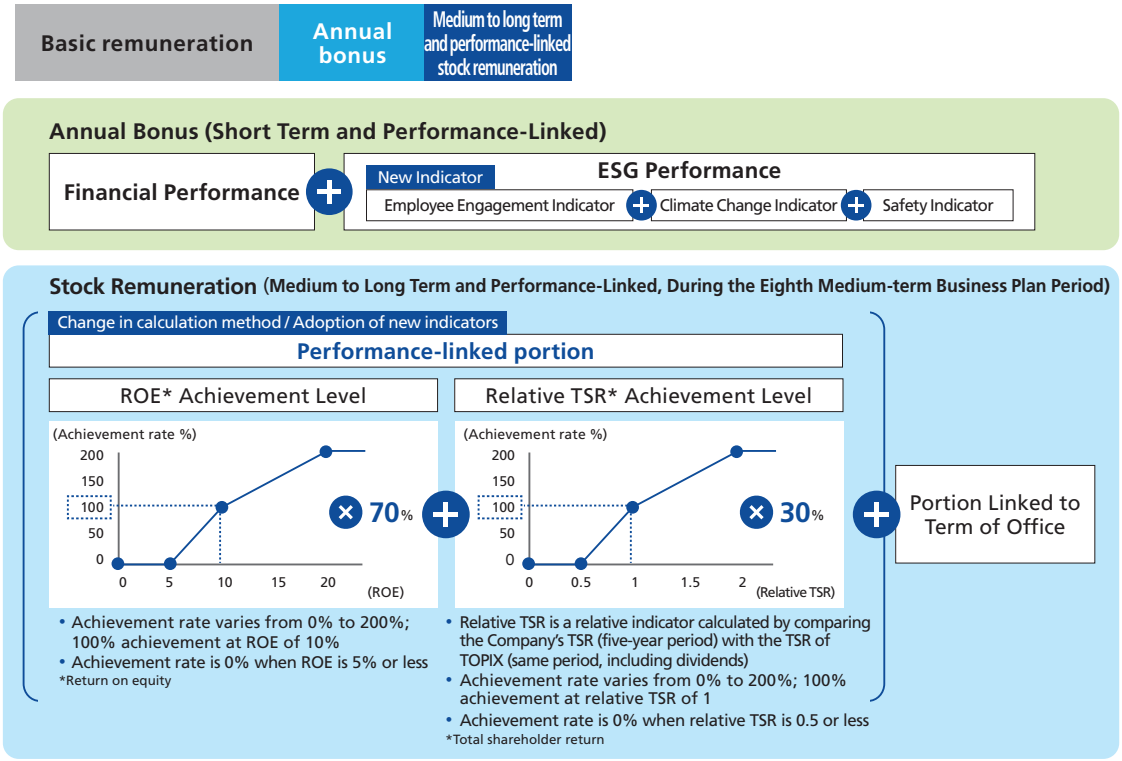
Directors and Corporate Officers who have been dismissed or have committed any misconduct may lose the right to receive benefits based on a resolution of the Board of Directors. Directors and Corporate Officers who have already received benefits may, based on a resolution of the Board of Directors, be required to return the shares and cash already provided if they engage in any misconduct.

To achieve sustainable corporate growth for the Group, the Remuneration Committee and the Board of Directors continue to improve the remuneration system for Directors to serve as an incentive with a higher level of integrity.

The outline of remuneration system for the Company's and Directors (excluding Directors who are Audit & Supervisory Committee Members)

Remuneration ratio of the Company's President upon achievement of the targets

Basic remuneration : Annual bonus : Stock remuneration = 2 : 1 : 1



› Governance Data: Operating System (P. 294)

Internal Control

The JFE Group's internal control system, in accordance with the Basic Policy for Building an Internal Control System, is maintained through various committee regulations including the Rules of the Board of Directors, Regulations for Group Management Strategy Committee, Regulations for Management Committee, Regulations for the JFE Group Sustainability Council, Regulations for Organization and Operations, Regulations for Document Management, Regulations for Addressing Violence Directed at Companies, and a Corporate Ethics Hotline. These regulations are periodically reviewed to ensure their effectiveness.

In addition, we revise and improve the Basic Policy from time to time to boost sustainable corporate value. In April 2026, the Basic Policy for Building an Internal Control System was reviewed, and a framework was established under which CCOs (Chief Compliance Officers) were appointed at the Company and each operating company, with the CCO of the Company serving as chairperson of the JFE Group Compliance Committee and the CCO of each operating company serving as chairperson of its respective Compliance Committee. At the same time, the details of coordination between the internal auditing department and the Audit & Supervisory Committee were clarified.

› Basic Policy to Establish the Internal Control Systems (https://www.jfe-holdings.co.jp/en/common/pdf/company/info/Basic_Policy_Internal_Control.pdf)

Strengthening Internal Control

Internal Audits

JFE Holdings, its major operating companies, and key Group companies have internal audit organizations comprising 187 people as of April 1, 2026. These organizations share information with one another to enhance overall auditing within the Group. They also report internal audit plans and findings to the Board of Directors, the Audit & Supervisory Committee, and the JFE Group Sustainability Council annually to maintain the effectiveness of internal audits.

As part of its commitment to thorough compliance, the JFE Group annually audits adherence to laws and internal regulations, including the Antimonopoly Law, measures taken to prevent the bribery of public officials, tax laws, security export controls, protection of personal information, as well as safety, disaster prevention, and environmental management. If an audit finds an issue or problem, the internal audit departments of JFE Holdings and the operating company work together to share the information across the Group and incorporate lessons learned in sustainability activities conducted by the Group's companies.

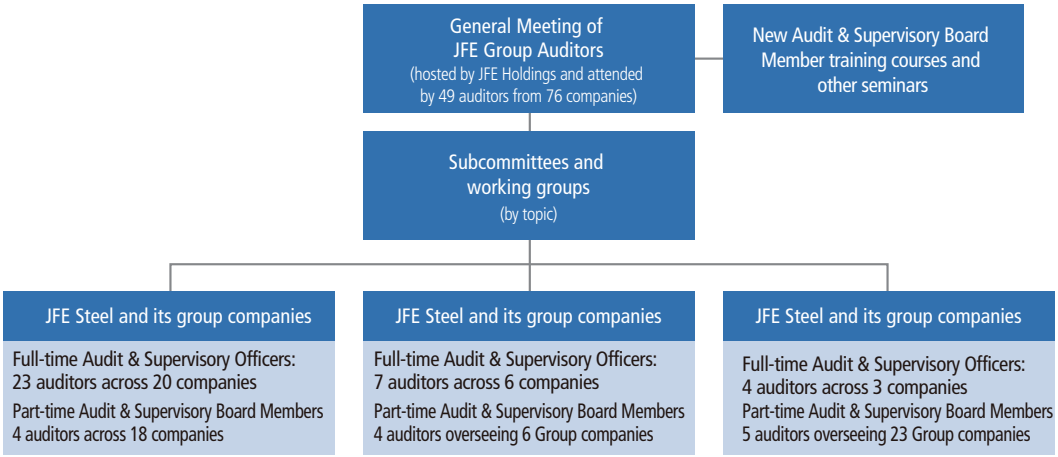
Audits by Audit & Supervisory Committee

The Company's Audit & Supervisory Committee comprises five Audit & Supervisory Committee Members, including three Outside Directors who serve as Audit & Supervisory Committee Members. Regarding the internal control system, the Audit & Supervisory Committee regularly receives reports from Directors, Executive Officers, and others on the status of its establishment and operations, requests explanations as necessary, and expresses its opinions. In accordance with the audit standards for the Audit & Supervisory Committee, audit policies, audit plans, and assignment of duties established by the Audit & Supervisory Committee, each Audit & Supervisory Committee Member, in coordination with the Company's internal auditing department, attends meetings of the Board of Directors and other important meetings, receives reports from Directors, Executive Officers, and others on the execution of their duties, requests explanations as necessary, inspects important approval documents, and investigates the status of business operations and financial conditions. With respect to subsidiaries, Audit & Supervisory Committee Members communicate and exchange information with the Directors and Corporate Auditors of subsidiaries, receive business reports from them as necessary, and investigate the status of their business operations and financial conditions. Through these methods, the Audit & Supervisory Committee audits the execution of duties by Directors. In addition, it forms its opinions on the appointment, dismissal, and remuneration of Directors after examining the deliberations of the Nomination Committee and the Remuneration Committee.

A total of 49 full-time Audit & Supervisory Officers (including full-time Audit & Supervisory Committee Members and full-time Audit & Supervisory Board Members) and dispatched Audit & Supervisory Board Members* have been appointed across 76 companies throughout the Group, including JFE Holdings, establishing an audit framework.
The JFE Group Board of Auditors has been established, comprising these members, under which subcommittees and working groups created to address specific issues meet autonomously to share information, investigate issues, and enhance understanding. The findings of the year's activities are presented at the general meeting of JFE Group Auditors and used for the audit activities of each Audit & Supervisory Officer.

*Operating company personnel are dispatched to Group companies as part-time Outside Audit & Supervisory Board Members. Each dispatched Audit & Supervisory Board Member audits an average of one to five Group companies, with 13 Members covering 47 companies.

The JFE Group Board of Auditors



Status of Coordination among the Audit & Supervisory Committee, the Accounting Auditor, and the Internal Auditing Department

The Audit & Supervisory Committee holds meetings on a regular basis and as necessary with Ernst & Young ShinNihon, JFE's outside accounting auditor, in which the latter presents its audit plan, completed work, and results. The firm also presents an explanation of its quality management system. In turn, the Audit & Supervisory Committee explains its own audit plans and other matters and exchanges opinions to maintain close coordination. In addition, the Audit & Supervisory Committee holds meetings with the internal auditing department on a regular basis and as necessary, receives reports on internal audit plans and the status of internal audit execution and results, and exchanges opinions to maintain a close working arrangement. At the same time, it requests the internal auditing department to conduct investigations as appropriate and provides specific instructions, thereby striving to improve the effectiveness of audits.

Operating Company Governance

Some Directors and Corporate Officers of JFE Holdings serve concurrently as Directors or Audit & Supervisory Board Members of operating companies to strengthen governance and information sharing across the Group. To strengthen governance, JFE Holdings' managers attend each operating company's General Meeting of Shareholders and Management Planning Briefing, receive reports on their activities, and discuss the management policies of subsidiaries.

Policy on Listed Subsidiaries and Listed Affiliates

(1) Significance of having listed subsidiaries and affiliates based on group management approach and policies

To put into practice the Group's corporate vision of contributing to society with the world's most innovative technology, and to realize sustainable growth and enhancement of medium- to long-term corporate value, the Company forms a corporate group comprising companies with high expertise, divides business functions within the Group, and conducts business development outside of the Group. Within this corporate group, JFE Steel Corporation, a subsidiary of the Company, owns one listed subsidiary and four listed affiliates, described below.

For the listed subsidiary among them, the Company seeks an optimal structure based on the business relationship with JFE Steel Corporation, its parent company, and maintains its listing based on a comprehensive judgment that listing is necessary for the company's growth and increasing the value of the Group as a whole, from the perspective of market recognition and credibility in funding, sales and marketing, and hiring.

In addition, the four listed affiliates maintain their listing as a means to enhance their competitiveness from the perspectives of market recognition and credibility in funding, sales and marketing, and hiring. JFE Steel Corporation holds some shares in the four companies because of associated benefits such as the exchange of steel manufacturing-related technologies and human resources.

Listed Subsidiary

JFE Systems, Inc. (Tokyo Stock Exchange, Standard Market)

The main business of JFE Systems includes system integration consisting of planning, designing, developing, operation, and maintenance of information system, system construction utilizing solutions, and the company's own products, and IT infrastructure solutions that support the business system. Computer systems are an important foundation in the steel business that support overall business activities, including order acceptance, production, shipment, and quality management, and in using a variety of data. Guaranteeing the accumulation of know-how and the continuation of personnel exchanges by holding JFE Systems as a subsidiary will also be indispensable for maintaining the competitiveness of JFE Steel in pressing ahead with digital transformation.

JFE Systems, Inc.'s predecessor, Kawasaki Steel Systems R&D Corporation, was listed on the 2nd Section of the Tokyo Stock Exchange in March 2001. As of March 31, 2026, the JFE Group holds a 68.1% stake in JFE Systems, Inc.

Listed Affiliates

Gecoss Corporation (Tokyo Stock Exchange, Prime Market)

Gecoss Corporation is mainly engaged in the rental and sales of temporary construction materials, as well as in design and construction of temporary works, etc. Gecoss Corporation's predecessor, Kawasho Lease System Co., Ltd., was listed on the 2nd Section of the Tokyo Stock Exchange in August 1994 and was subsequently reassigned to the 1st Section of the Tokyo Stock Exchange in September 1996. As of March 31, 2026, the JFE Group as a whole currently holds a 39.5% stake in the company.

Shinagawa Refra Co., Ltd. (Tokyo Stock Exchange, Prime Market)

The change in the company's trade name from Shinagawa Refractories Co., Ltd. to Shinagawa Refra Co., Ltd. took effect on October 1, 2025. Shinagawa Refra Co., Ltd. is mainly engaged in the manufacture and sale of refractories as well as engineering services such as furnace design and construction. Shinagawa Shirorenga, the predecessor of the company, was listed on the 1st Section of the Tokyo Stock Exchange in May 1949 and subsequently became an affiliate of JFE Steel Corporation. As of March 31, 2026, the JFE Group holds a 34.9% stake in Shinagawa Refra Co., Ltd.

Nippon Chuzo K.K. (Tokyo Stock Exchange, Standard Market)

Nippon Chuzo K.K. is mainly engaged in the formed and fabricated materials business for manufacturing a variety of casting products and the engineering business to design and manufacture bridge components, etc. The company was listed on the 2nd Section of the Tokyo Stock Exchange in October 1961. As of March 31, 2026, the JFE Group holds 36.2% shares of Nippon Chuzo K.K.

NIPPON CHUTETSUKAN K.K. (Tokyo Stock Exchange, Standard Market)

NIPPON CHUTETSUKAN K.K. is mainly engaged in the manufacture and sale of ductile iron pipes and polyethylene pipes, as well as water pipe laying works. The company was listed on the 2nd Section of the Tokyo Stock Exchange in July 1962 and subsequently became an affiliate of JFE Steel Corporation. As of March 31, 2026, the JFE Group holds 30.0% shares of NIPPON CHUTETSUKAN K.K.

The aforementioned five companies are subject to rules different from those applicable to other consolidated subsidiaries and affiliates based on the guidelines of the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange regarding listed subsidiaries, and other measures are also taken so as to ensure that each of the companies conducts autonomous corporate activities exercising autonomy and flexibility. Each company also secures its management independence as a listed company mainly by appointing outside directors who are independent from each company, JFE Steel Corporation and the Company and by establishing special committees composed of independent members including independent outside directors, and makes sure that the interests of the said subsidiary or affiliate, as well as the interests of shareholders of the subsidiary or affiliate other than the Company, will not be unfairly impaired.

With regard to the adjustment and allocation of business opportunities and business areas for the listed subsidiary and affiliates, the Company respects autonomous management decisions made by each company, except in cases where such decisions have a significant impact on the Company's consolidated financial statements.

In addition, each company independently raises and manages funds based on its own financial strategy. At present, the Company does not receive fund deposits from listed subsidiaries or listed affiliates.

With respect to matters necessary for the Group's risk management, prior consultation and reporting are required from each company while securing their independent decision-making, so as to implement risk management as a member of the Group.

(2) Measures to ensure the effectiveness of governance systems at listed subsidiaries and affiliates

Each company independently formulates its own proposals regarding the nomination of officers. JFE Steel Corporation fully respects the independence of each company and the decisions made by each company's nomination committee, and exercises its voting rights with the aim of improving each company's corporate value in the medium to long term.

To maximize the benefits of technological and personnel exchanges with each company, the Company and JFE Steel Corporation may recommend director candidates in some cases.

Furthermore, we shall regularly verify the significance of maintaining the listing of the listed subsidiaries and take necessary measures upon confirmation by its Board of Directors. The above details were verified and discussed at a Board of Directors meeting in May 2026.

Basic Policies for Strategic Shareholdings and Exercise of Related Voting Rights

All shares held by the Company are the shares of subsidiaries or affiliates. In principle, the Company's wholly owned subsidiaries and operating companies, JFE Steel Corporation, JFE Engineering Corporation, and JFE Shoji Corporation (hereinafter "Operating Companies"), do not hold listed stocks as strategic shareholdings. Strategic shareholdings, however, are allowed as an exception when holding the stocks of the Company is determined to be necessary for maintaining and achieving growth for the Group.

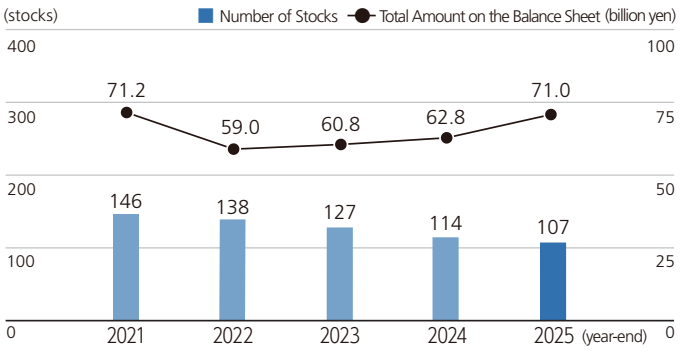
The Board of Directors regularly confirms the relative value of the strategic shareholdings and whether the benefits and risks of such holdings are commensurate with their capital cost, and sells shareholdings that are not significant or for which there is a risk of damage to shareholder interests. In FY2025, the Company sold all or part of five listed stocks for 2.4 billion yen (market value). Furthermore, the Board of Directors regularly examines the significance of strategic holdings and the return on investment.

The exercise of voting rights of strategic shareholdings is decided upon reviews by operating companies on the content of the proposal and is appropriately implemented in a way that will maximize shareholder interest. To be specific, the content of the proposal is to be checked by the investment application department and the investment control department, and approval will be given to proposals which are considered not to pose any threat to the maximization of interest of these operating companies as shareholders.

Of the shares for investment purposes held by JFE Steel, which has the largest balance sheet amount for investment purposes posted in the consolidated financial statements of the company, those shares of the company held for purposes other than pure investments are shown below.

Number of Stocks and Amount Recorded on the Balance Sheet

	FY2021 year-end	FY2022 year-end	FY2023 year-end	FY2024 year-end	FY2025 year-end
Number of stocks (stocks)	146	138	127	114	107
Total amount recorded on the balance sheet (billion yen)	71.2	59.0	60.8	62.8	71.0



Compliance

Basic Policy

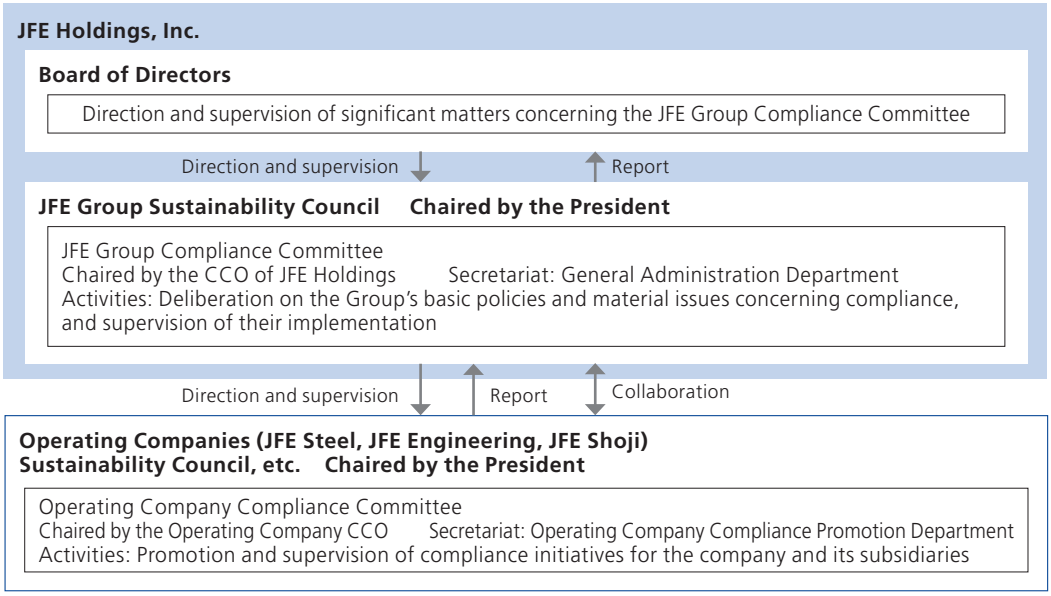
In expanding our businesses in Japan and abroad, it is important that JFE maintains relationships of trust with all stakeholders, including its customers, shareholders, and local communities. Trust can only be built upon a strong foundation of ensuring thorough compliance. Misconduct and scandals resulting from compliance violations can instantly shatter the trust that has taken many years to establish. The JFE Group positions compliance as a key management issue and believes it is extremely important that all members of the organization deepen their knowledge and awareness of compliance and perform their jobs accordingly. It conducts training on various topics such as the Antimonopoly Act, the SME Transactions Act, and anti-corruption, including prevention of bribery of public officials, using e-learning and compliance guidebooks and through guidebook reading sessions as well as by other means.

Compliance System

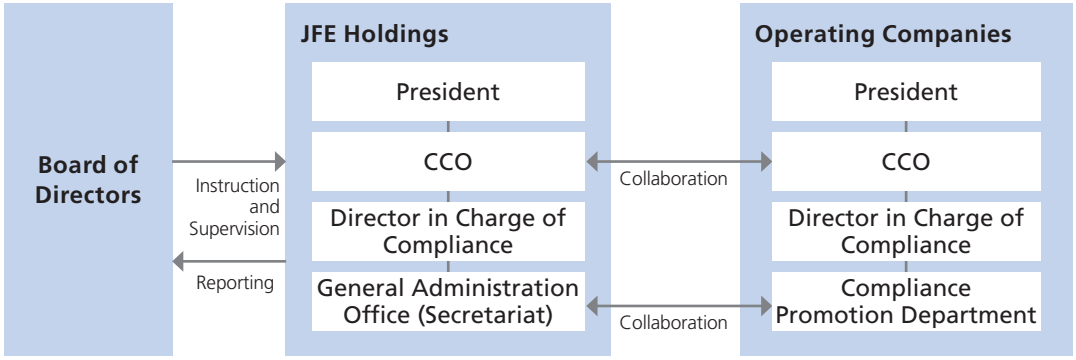
In April 2026, the JFE Group established the JFE Group Basic Policy on Compliance with the aim of further clarifying the Company's policy on ensuring thorough compliance when putting into practice its Corporate Vision, Corporate Values, and Standards of Conduct. In addition, the Group appointed Chief Compliance Officers (CCOs) at each company and established specialized compliance organizations at each operating company. In the event that a particularly serious compliance incident occurs, it is promptly reported to the Board of Directors, which provides supervision.

Under the JFE Group Sustainability Council, chaired by the President of JFE Holdings, the JFE Group Compliance Committee, chaired by the CCO, is established to deliberate on the Group's basic policies and material issues concerning compliance and supervise their implementation, generally convening about four times a year. Significant matters discussed by the JFE Group Compliance Committee, including basic Group compliance policies, responses to serious compliance incidents, the operational status of the whistleblowing system, and the results of the Corporate Ethics Awareness Survey and related initiatives, are reported annually to the Board of Directors for direction and supervision. In addition, each operating company has established an Operating Company Compliance Committee chaired by its respective CCO, creating a framework to promote and supervise business activities in compliance with laws and regulations for itself and its Group companies. Furthermore, the JFE Group has introduced a Corporate Ethics Hotline to ensure that crucial information regarding compliance can be communicated directly from the front lines to top management.

Compliance System



Structure for Responding to Compliance Incidents



For more on the JFE Group Standards of Business Conduct, and the "JFE Group Basic Policy on Compliance," please refer to the following information.

> **JFE Group Standards of Business Conduct** (https://www.jfe-holdings.co.jp/en/company/philosophy/guideline.html)

> **JFE Group Basic Policy on Compliance** (https://www.jfe-holdings.co.jp/en/company/philosophy/compliance-policy.html)

Targets and Results

The JFE Group Standards of Business Conduct guide employees to conduct their business activities based on the Corporate Vision and Corporate Values. They also help to strengthen awareness among all JFE Group executives and employees and ensure adherence to corporate ethics. We promote the initiatives by upholding the Ensure Adherence to Corporate Ethical Standards and Compliance as material issues of corporate management and setting KPIs to achieve those targets.

> **FY2025 KPI Results and FY2026 KPIs** (P. 19)

Initiatives

Ensure Adherence to Corporate Ethical Standards and Compliance

Compliance Education

The JFE Group's Compliance Guidebook, created as part of our effort to foster corporate compliance culture across the Group, is distributed to all Directors and employees inside and outside Japan for individual and group review. In addition to information about laws and ordinances relevant to our business activities, it provides guidance on which actions comply with internal rules and which do not (such as cartels, collusive bidding, the bribing of public officials, etc., insider trading, harassment, and other acts in violation of laws related to the environment, labor standards, and occupational health and safety). The guidebook also provides a simple explanation of concrete standards for complying with laws and internal rules and for acting in accordance with social mores with over a hundred case studies.

Questions that come up in the course of daily operations, as well as situations and cases that test our judgment, have been compiled in the guidebook with explanations by the relevant department. The content has been reviewed by legal counsel. The guidebook has been reviewed regularly according to the revisions of relevant laws and rules, and some of the cases described have been added, revised, or omitted.

The JFE Group also conducts regular training on compliance with the Antimonopoly Act, the SME Transactions Act, insider trading restrictions, security export controls, the Construction Business Act, anti-corruption laws including laws against bribery of public officials, and more.

In addition, beginning in FY2025, we introduced "Integrity Training," which includes case studies and other exercises designed to foster awareness and encourage employees to independently consider measures for preventing and responding to compliance violations.

Whistleblowing System

The JFE Group has established a Corporate Ethics Hotline, a contact point accessible to all officers and employees (including contract workers, part-time workers, and temporary staff, either active or retired) of the JFE Group as well as those of suppliers and other business partners. The purpose of the hotline is to ensure adherence to corporate ethics and compliance and to prevent corruption and human rights abuses. The Group strives to prevent misconduct, detect it an early stage, and take prompt corrective action by accepting consultations and reports across a wide range of issues, from legal violations such as Antimonopoly Act violations, corruption, and bribery to workplace misconduct and human rights abuses, including harassment. Reports and consultations are accepted via email, a dedicated phone line, and postal mail, anonymously if preferred (email is available 24/7 in both Japanese and English), and an external hotline to an independent law firm is also provided.

To encourage the active sharing of information, the Corporate Ethics Hotline is operated under rules and regulations that ensure strict confidentiality and protect people who report information or seek advice against acts of retaliation. We investigate the facts of any incident that has been reported on and consulted about only after consulting with the whistleblower to protect their privacy, and feedback the investigation results to the whistleblower if requested.

In the event that violations of laws are confirmed, corrective and remedial measures are taken in the organization involved. Details of the reports and consultation received at the Corporate Ethics Hotline are regularly communicated to full-time Audit & Supervisory Board Members (including full-time Audit & Supervisory Committee Members and full-time Audit & Supervisory Board Members) while the operational status of the system is reported to the Board of Directors for their supervision.

We accept inquiries, anonymously if preferred, on compliance and other issues from external stakeholders via a form available on the corporate website. The content is handled as confidential and appropriately addressed.

Procedures for handling illegal acts or other violations:

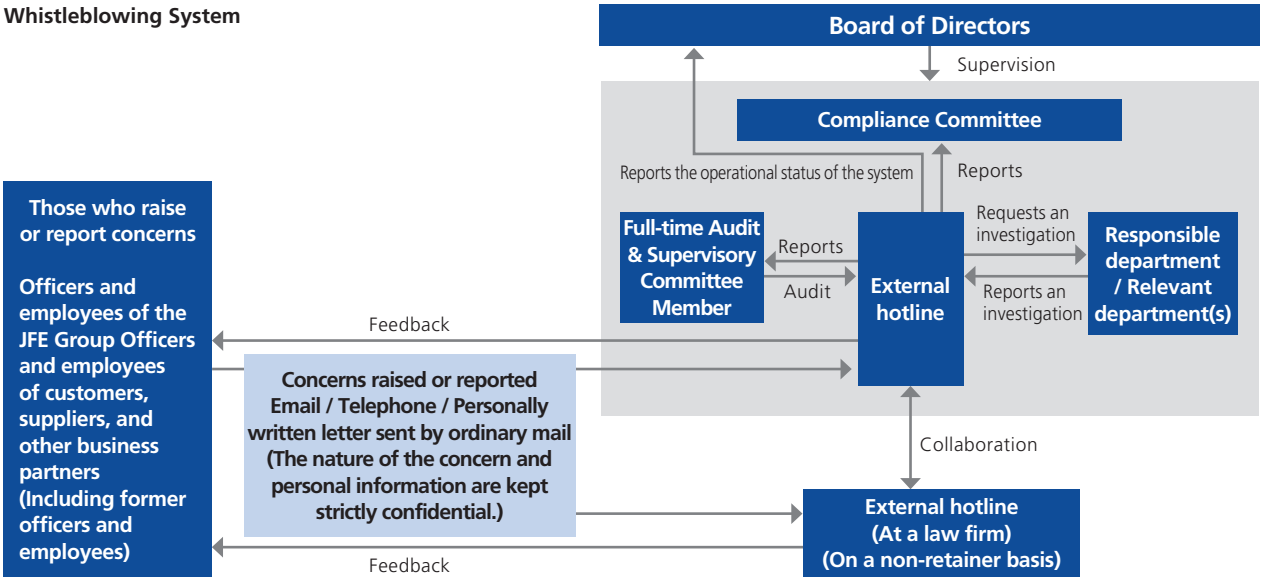
- Departments responsible for compliance at JFE Holdings and the dedicated compliance organizations at each operating company carry out necessary responses, such as implementing the initial response, confirming facts, investigating the cause, and developing measures to prevent recurrence
- Departments responsible for compliance at each operating company report on the facts, cause, and recurrence prevention measures to the Compliance Committee at each company to confirm the cause and assess the effectiveness of recurrence prevention measures and the responsibility of related parties
- In the event of a major compliance incident, the JFE Holdings CCO promptly reports to the Board of Directors, which provides appropriate oversight. Matters such as major violations are reported to the Compliance Committee to be shared across the entire Group and to facilitate horizontal implementation of recurrence prevention measures to make sure that no similar violations occur anywhere in the Group

To increase the awareness and credibility of these internal reporting systems, we actively publicize them through the Company intranet, the internal newsletters of each operating company, and workplace posters, as well as during compliance training sessions that use materials distributed to all Group employees.

In addition, we invited an outside attorney to conduct a seminar for corporate ethics hotline and harassment consultation desk staff (those who receive reports, including management) within the JFE Group. We organize these training sessions every two years for hotline and consultation desk personnel, including content on confidentiality obligations when receiving reports and case studies (participants: approx. 200 in FY2020, approx. 300 in FY2022, and approx. 300 in FY2024).

› Governance Data: Whistleblowing (P. 296)

Whistleblowing System



Preventing Corruption and Bribery

Under its Standards of Business Conduct, the JFE Group endeavors to comply with laws and ordinances, compete fairly and freely, refrain from illegal business activities, and build and maintain sound and proper relationships with governments and political authorities.

We explicitly prohibit bribery, such as the offering and receiving of illegal payoffs, excessive entertaining or favors, as well as corruption such as embezzlement from a position of advantage and promotion of conflicting interests. The Group strives to thoroughly prevent corruption by stating in its Company rules that these offenses will be penalized.

The bribing of public officials has become a major business risk in recent years due to growing global awareness of corruption and a stronger drive by authorities to expose such wrongdoing. The JFE Group does not tolerate any kind of illegal activity in Japan or any other country, including bribery, such as offering money or other benefits to public officials, and never resorts to these illegal activities to gain profits or resolve problems.

In accordance with this policy, when engaging external parties, including agents or consultants who may have connections with overseas public officials, the JFE Group maintains and operates systems to prevent the bribery of public officials by informing them of this policy, conducting reviews using a third-party appointment checklist, or having an anti-bribery confirmation letter signed. Furthermore, the effective establishment and operation of these systems is annually confirmed through internal audits, and the results are reported to the Board of Directors.

In addition, based on the results of risk assessments, the JFE Group provides employees with annual training and e-learning programs on the prevention of bribery of public officials.

In FY2025, there were no major incidents concerning the bribery of public officials.

For more on our stance on preventing bribery, please refer to the following information.

› **JFE Group's Basic Policy on Preventing Bribery of Public Officials** (https://www.jfe-holdings.co.jp/en/company/philosophy/anti-bribery.html)

Tax Transparency

The JFE Group upholds the JFE Standards of Business Conduct and complies with both the letter and spirit of the tax laws of each country as well as international rules, including the taxation guidelines issued by the Organization for Economic Co-operation and Development and other international institutions. We will pay taxes in every country where we do business in a timely, appropriate, and fair manner.

Moreover, we seek to forge relationships of trust with the tax authorities in each country by raising transparency and without resorting to tax planning or the use of tax havens to evade taxation.

Resisting Organized Crime

The JFE Group declares in its standards of business conduct that it will firmly resist all antisocial forces and has established the JFE Group Policies for Addressing Antisocial Forces and Regulations for Addressing Violence Directed at Companies to clarify the measures to be taken against antisocial forces, including an initial response manual.

The JFE Group Policies for Addressing Antisocial Forces has been approved by the Board of Directors, and we seek to establish sound corporate management based on an organized and unified response to the issue within the framework of our system of compliance. We have specifically set up a section responsible for handling antisocial forces in the General Administration and Legal Affairs departments of each Group company to completely discontinue any dealings with antisocial forces. We also set up rules for reporting and responding to any related incidents and resolutely stand against antisocial forces by cooperating with law enforcement.

In addition, we seek to establish thorough awareness of the JFE Group Policies for Addressing Antisocial Forces and specific rules governing our response among all executives and employees by providing e-learning and distributing the Compliance Guide Book.

Compliance with the Antimonopoly Act

The JFE Group, in its JFE Group Standards of Business Conduct, requires complying with laws and regulations, engaging in fair and free competition, conducting legitimate business activities, and acting with integrity in accordance with sound business practices. The JFE Group views past violations of the Antimonopoly Act seriously and established the JFE Group Basic Policy on Competition Law Compliance on the principle of zero tolerance for violating the Antimonopoly Act and other laws and strictly responding to any infringements. Under this policy, the Group establishes and maintains operating rules for contact with competitors, conducting in-house training, and performing internal audits to ensure compliance with the Antimonopoly Act. Periodic reports to the Group Compliance Committee strengthen oversight and support the effective implementation of initiatives.

In FY2025, there were no major incidents involving violations of the Antimonopoly Act.

For the JFE Group Basic Policy on Competition Law Compliance, please refer to the following information.

› **JFE Group Basic Policy on Competition Law Compliance)** (https://www.jfe-holdings.co.jp/en/company/philosophy/competition-law.html)

Confirmation and Improvement through the Employee Corporate Ethics Awareness Survey

The JFE Group regularly conducts a Corporate Ethics Awareness Survey (once every two years starting in FY2024) for Directors and employees of the Company as well as the operating companies to confirm the penetration of and thorough compliance with the Group's Corporate Vision, Corporate Values, and Standards of Business Conduct, along with the identification of potential risks. The survey conducted in FY2024 confirmed that many employees sufficiently understood the Group's Vision, Corporate Values, and relevant laws and regulations, with a consistently high awareness of compliance, including adherence in the workplace to the JFE Group's Basic Policy on Preventing Bribery of Public Officials and the Guidelines for Entertainment and Gifts. On the other hand, the survey also brought to our attention issues to address going forward. The results of the Corporate Ethics Awareness Survey and the policy responses were reported to the JFE Group Sustainability Council and the Board of Directors in FY2025, and under their oversight, each company implemented specific initiatives and pursued improvements. A similar survey will be conducted in FY2026 to confirm the progress of improvements and changes in employee awareness, and the findings will be incorporated into future initiatives.

At the time of formulating the Eighth Medium-term Business Plan, announced in May 2025, the Board of Directors of JFE Holdings reaffirmed that the Group's Corporate Vision and Corporate Values remain the unchanging principles of the JFE Group, serving as a unifying force for the entire organization since its founding.

Compliance Incidents in the JFE Group

Indictment of JFE Group Company Employees

With regard to the submarine water pipe renewal work that JFE Engineering Corporation contracted with Taketomi Town, Okinawa, in June 2017 and June 2020, a former employee of JFE Engineering Corporation was convicted for violating the Act on Elimination and Prevention of Involvement in Bid Rigging, etc., and for obstructing public contract-related auction bidding. As a result, in May 2025, the Ministry of Land, Infrastructure, Transport and Tourism issued a 60-day business suspension order against the company, covering public works related to the water supply facilities construction business throughout Japan, pursuant to the Construction Business Act.

We regard this matter very seriously and sincerely. We will strive to regain public trust as early as possible by continuing to take action to prevent a recurrence.

Inappropriate Conduct in JFE Shoji's Biomass Fuel Trading

JFE Shoji Corporation has confirmed the occurrence of inappropriate conduct* in connection with its biomass fuel trading business involving certain customers.

JFE Shoji Group companies have been implementing measures to prevent recurrence, such as conducting Integrity Training, sharing information on incidents across the Group, conducting self-checks, and issuing messages from the President. The status of implementation has also been reported to and shared with the JFE Group Compliance Committee, with the Board of Directors exercising supervision over these efforts.

The JFE Group takes this matter extremely seriously, is fully committed to implementing thorough measures to prevent recurrence, and will work in concert to regain trust as quickly as possible.

*With respect to palm kernel shells and wood pellets supplied to biomass power plants, the company's Biomass Fuel Department charged customers prices and marine freight costs in excess of the contractually agreed amounts, thereby obtaining undue profit.

For more on our stance on our measures to prevent recurrence, please refer to the following information.

› **JFE Shoji Official Website (Japanese only)** (https://www.jfe-shoji.co.jp/wjfep/wp-content/uploads/2025/06/news250619.pdf)

Risk Management

Basic Policy

In order to enable the Group to achieve sustainable growth with ever-increasing corporate value through the pursuit of its vision of "contributing to society with the world's most innovative technology," we have properly identified risks across the Group. Our risk management system is subject to ongoing improvement, and effective measures are taken to eliminate as many foreseeable risks as possible.

Risk Management System

JFE Holdings is responsible for comprehensive risk management of the Group in accordance with its Basic Stance for Building an Internal Control System. The Company's Board of Directors fulfills its supervisory responsibility for risk management and has established a system to confirm its effectiveness.

With respect to risks associated with business activities, Corporate Officers responsible for each field recognize and assess these risks. As necessary, risks are further confirmed and assessed at the Group Management Strategy Council or the Management Council, both chaired by the Representative Director and President (CEO) of JFE Holdings, where countermeasure policies and risk management action plans are deliberated and decided. In addition, the responsible Corporate Officers recognize and assess ESG-related risks in areas such as compliance with the Antimonopoly Act and laws related to anti-corruption including bribery of public officials, observance of corporate policy and regulations such as the Corporate Vision and JFE Group Standards of Business Conduct, environment and climate change, personnel affairs and labor, safety and disaster prevention, human rights abuses such as sexual and power harassment, quality management, financial reporting, and information security. As necessary, these risks are confirmed and assessed by the Representative Director and Group Sustainability Council, chaired by the President (CEO) of JFE Holdings, where countermeasure policy and action plans for risk management are deliberated and decided to ensure a Groupwide response.

The Board of Directors oversees risk management and confirms its effectiveness by regularly receiving reports on Group policy and action plans on risk management, and through deliberation and decision-making on important matters.

We will continue to improve and strengthen the Groupwide risk management system based on discussions by the Board of Directors.

For our risk management policies and systems, please refer to the following information.

› **Basic Policy for Building Internal Control Systems (Japanese only)** (https://www.jfe-holdings.co.jp/company/info/pdf/naibutousei.pdf)
› **JFE Group Sustainability System** (P. 10)
› **Whistleblowing System** (P. 265)

Initiatives

Response to Specific Risks

Response to Climate Change Risks

The JFE Group has positioned "Ensuring Environmental and Social Sustainability" as one of its key initiatives and formulated the JFE Group Environmental Vision for 2050, which aims to achieve carbon neutrality by 2050. Through this vision, the Group incorporates efforts to address climate change into its business strategies and reflects the principles of the TCFD in its management approaches. In doing so, we are systematically advancing initiatives to address climate change issues and striving to become a front-runner in the development of technologies for achieving carbon neutrality.

For climate change risks and opportunities, please refer to the following information.

› **Identification and Assessment of Risks and Opportunities (TCFD Scenario Analysis)** (P. 113)

Intellectual Property Management

The JFE Group meticulously manages intellectual property across its diverse business activities. To prevent infringement on third-party intellectual property, it constantly monitors the latest information on intellectual property and implements all necessary measures.

For intellectual property activities, please refer to the following information.

› **JFE Group Report** (https://www.jfe-holdings.co.jp/en/investor/library/group-report/)

Privacy Protection

JFE has established the JFE Group Privacy Statement for managing information including "My Number," the individual number used under Japan's Social Security and Tax Number System.

To maintain the appropriate protection of personal information, employee trainings on the rules, which have been set in place in accordance with the privacy statement, have been conducted as stipulated in applicable laws of each country related to businesses and guidelines.

To reduce information security risks, including cyber-attacks and improper system use such as leaks of personal information, and to promote safe business activities, the JFE-Security Integration and Response Team (JFE-SIRT), comprising the IT division managers of each operating company, participates in the Nippon CSIRT Association, established by private sector volunteers and corporate Computer Security Incident Response Teams (CSIRTs) active in Japan. We seek to enhance the level of our initiatives by exchanging information and coordinating on security incidents.

For privacy protection policies, please refer to the following information.

› **JFE Group Privacy Statement** (https://www.jfe-holdings.co.jp/en/privacy.html)

Information Security

The JFE Group formulates various rules on information security management to prevent information leakage and system failures due to cyber-attacks and improper system use. Efforts are made to enhance information-security knowledge and awareness of rules among employees through training and education. Additionally, shared IT measures are applied in each Group company and regular information security audits are conducted to reinforce the overall information security management level in the Group.

Key issues related to IT, particularly information security, are deliberated by the JFE Group Information Security Committee to determine Group policy.

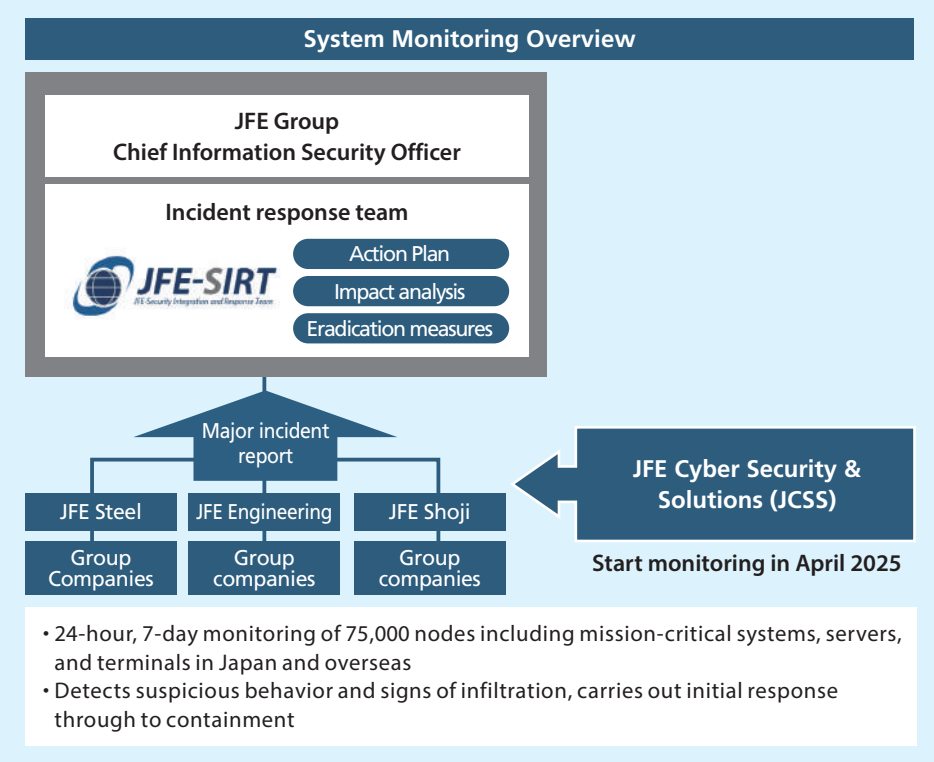
Applying the policies set by the committee, the JFE-SIRT formulates and implements information-security measures, performs information security audits, offers guidance on responding to incidents, and generally enhances the level of Groupwide information security management. In addition, JFE Cyber Security & Solutions, Ltd. was established in April 2024 to acquire and develop independent, high-level security personnel and strengthen security monitoring.

Furthermore, the JFE Group has announced the JFE Group Declaration of Cybersecurity Management. Even as we consider cybersecurity as a vital investment for our digital transformation, we understand its continual enhancement is also a material management concern, and we are further strengthening our measures, given the increasing severity, frequency, sophistication, and speed of recent cyber threats.

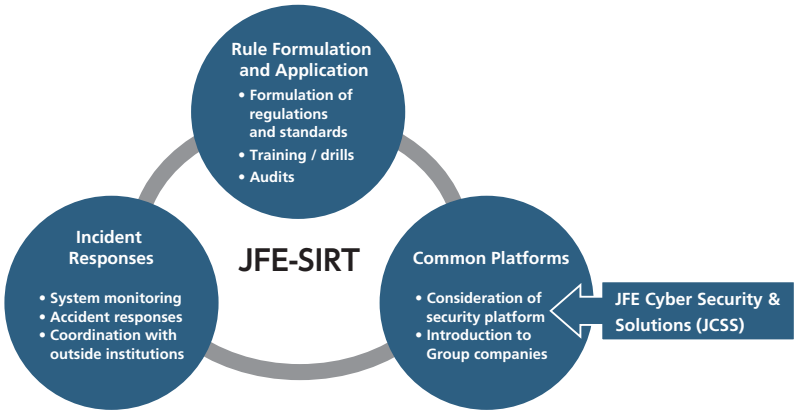
For more details about our cybersecurity measures, please see Security Management in the DX REPORT.

› **DX REPORT** (https://www.jfe-holdings.co.jp/en/investor/library/dxreport/index.html)

Digital Governance and Cyber Security Framework in the JFE Group



JFE-SIRT Initiatives



Response to Other Specific Risks

For details on other specific risks and our responses, please refer to the following information.

- **Annual Securities Report for the 24th Fiscal Year (P. 32)** ((https://azcms.ir-service.net/DATA/5411/ir/S100YCUD.pdf)
- **Initiatives to Address Climate Change** (P. 49)
- **Occupational Health and Safety** (P. 202)
- **Human Capital** (P. 186)
- **Human Rights** (P. 212)
- **Providing Quality Products and Enhancing Customer Satisfaction** (P. 226)
- **Supply Chain Management** (P. 233)

JFE Group's Business Continuity Plan

Anticipating the possibility of natural disasters caused by typhoons and major earthquakes as well as a rapid expansion of infectious diseases such as a novel influenza virus, the JFE Group has formulated a business continuity plan (BCP) to address contingencies. We conduct regular training based on the BCP while also pursuing other countermeasures.

In the event of a major earthquake, the Group Sustainability Council will promptly discuss and determine the policy on how to deal with the matter, based on predetermined response processes to minimize loss and other damages.

Response to Major Natural Disasters

We are preparing to respond in the event of a major earthquake through measures such as establishing tsunami shelters, maintaining a Companywide line of command under restricted communications and power outages, and securing data backup. We have also strengthened the drainage system at our steelworks to address the impact of typhoons and torrential rains that are occurring with increasing severity in Japan.

Response to Infectious Diseases

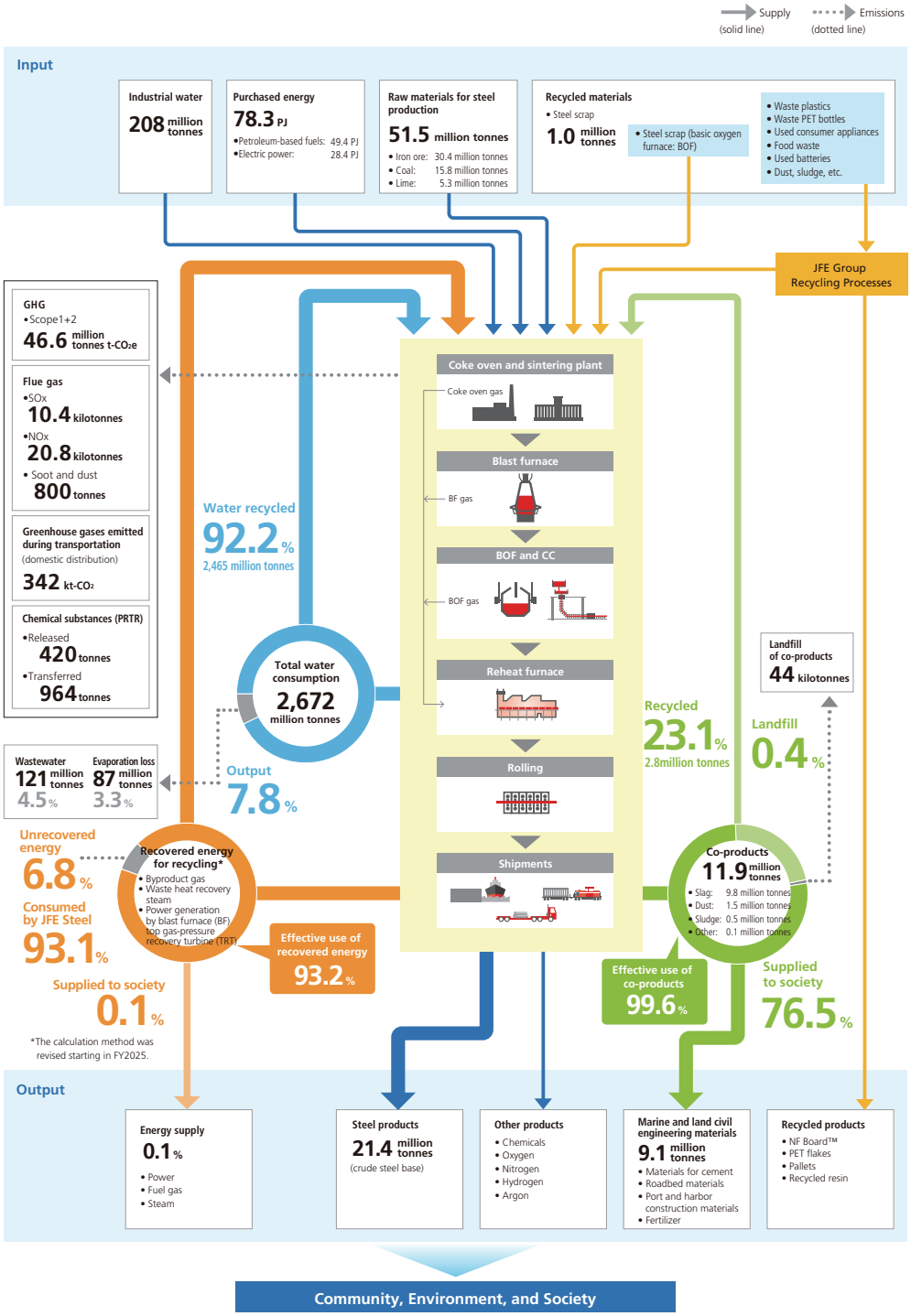
Apart from the development of policies against infectious diseases such as a novel influenza virus, we have been taking simulation-proven measures for varying scenarios to maintain key operations and prevent stoppages, including those at steel production sites and steelworks, even if there is an increase in the absence rate due to the spread of a disease. The policies are periodically reviewed and improved by the JFE Group Sustainability Council and other relevant bodies. Moreover, as a measure to protect employees against the threat of infectious diseases, we provide vaccinations and health checkups for employees, as well as their families, who are assigned to countries outside Japan and for those who go abroad for work. In addition to safety information in the destination countries, we also provide information about local infectious diseases and prohibit employees from going abroad to protect their safety, depending on prevailing circumstances.

Environmental Data

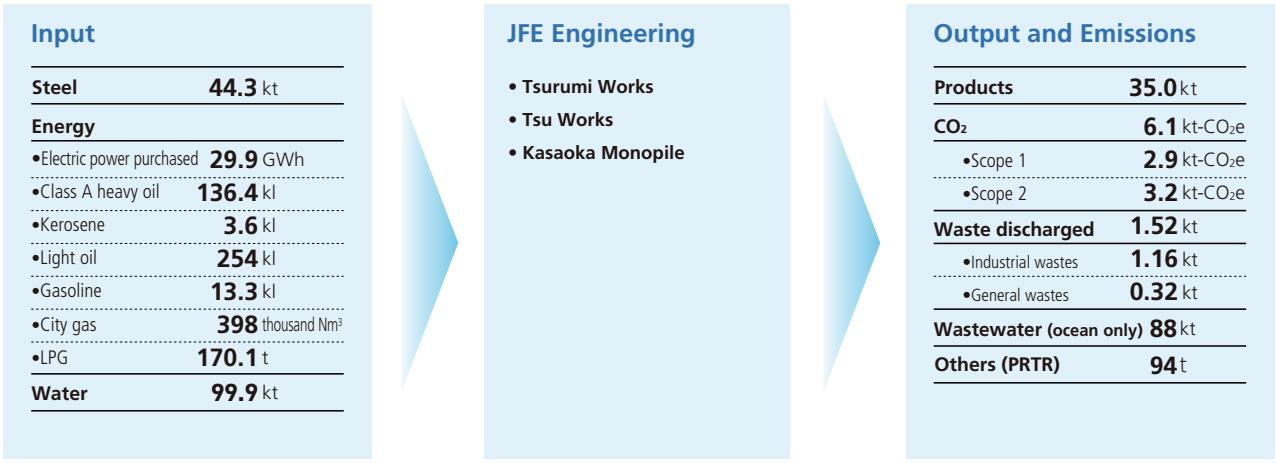
Material Flow

JFE Steel works to reduce the environmental impact of its iron and steelmaking processes, including through the effective use of resources. The company recycles 92.2% of the water it uses for production and uses 99.6% of its co-products, such as iron and steelmaking slag. In addition, 100% of co-product gas generated during production is reused as fuel for reheating slabs, generating power for internal use and supplying power to the public.

JFE Steel's Material Flow (Non-Consolidated)



JFE Engineering's Material Flow (Head Office and Works)



Abbreviations for scope of data: JFE Group (All); JFE Steel Group (ST Gr); JFE Steel (ST); JFE Engineering Group (EN Gr); JFE Engineering (EN); JFE Shoji Group (SH Gr); JFE Shoji (SH)

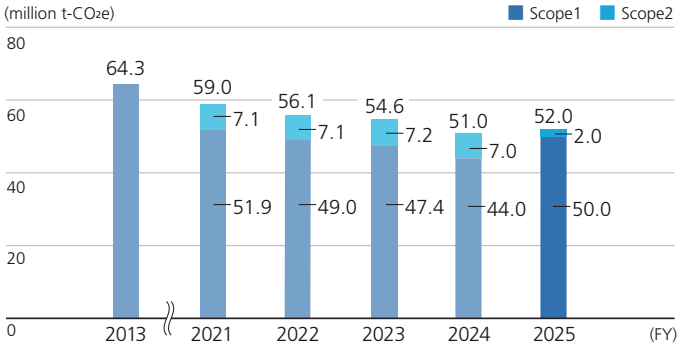
Note: The calculation method and scope of data for GHG emissions were revised in FY2025, and the company plans to expand the scope further in the future. Information on these revisions is provided for each item.

Environmental Indicators

Area	Operating Company	FY2025 Targets	FY2025 Results and Related Pages
Greenhouse Gas and Energy	ST	• FY2027 GHG emissions reduction: 24% or more from FY2013 levels	P.275
	EN	• Reduction in CO_2 emissions in own plants and offices: 40% from FY2013 levels • CO_2 reductions achieved through the provision of power generation facilities related to renewable energy and expansion of electricity supply operations: 12.5 million tonnes per year	P.275,277
	SH	• FY2025 domestic CO_2 emissions: 22.5% reduction from FY2019 levels	P.275
Chemical Substances	ST	• VOC emissions: –30% from FY2000 (1,078 t or less) • Benzene emissions: –80% from FY1999 (46 t or less) • Dichloromethane emissions: –40% from FY1999 (46 t or less)	P.279
Resource Use	ST	Recycling rate of co-products: 99% or higher	P.280
	EN	Recycling rate at construction sites • Recycling rate of rubble: 99.5% or higher • Recycling rate of sludge: 95.0% or higher • Recycling rate of industrial waste: 85.0% or higher Recycling rate of office recyclable waste • Yokohama head office: 98.0% or higher	P.281
	SH	Global recycling of steel scrap • Exceed FY2020 scrap trade volume (FY2025 target: +5% from FY2020)	P.280
Water Use	ST	Maintain efficient use of water Recirculated water usage rate: 90% or higher	P.282

Greenhouse Gas and Energy

GHG Emissions of the JFE Group (Scope 1, 2)



GHG Emissions of the JFE Group (Scope 1, 2)

Item	Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
CO_2 emissions (Scope 1 and 2 total)*1, 2	All	million t-CO_2e	59.0	56.1	54.6	51.0	52.0
	ST Gr	million t-CO_2e	58.6	55.7	54.1	50.8	51.5*3
	ST※4	million t-CO_2e	54.7	52.3	50.0	47.0	46.6
	ST subsidiaries	million t-CO_2e	3.9	3.4	4.1	3.8	11.3
	EN Gr	million t-CO_2e	0.387	0.422	0.482	0.234	0.486
	SH Gr	million t-CO_2e	0.0319	0.0316	0.0311	0.0298	0.0343
Scope1	All	million t-CO_2e	51.9	49.0	47.4	44.0	50.0
	ST Gr	million t-CO_2e	51.5	48.6	47.0	43.8	49.6
	ST	million t-CO_2e	48.8	46.4	44.1	41.2	40.3
	ST subsidiaries	million t-CO_2e	2.7	2.2	2.9	2.6	9.3
	EN Gr	million t-CO_2e	0.345	0.395	0.459	0.215	0.450
	SH Gr	million t-CO_2e	—	—	—	—	0.003
Scope2*5	All	million t-CO_2	7.1	7.1	7.2	7.0	2.0
	ST Gr	million t-CO_2	7.0	7.0	7.1	7.0	1.9*3
	ST	million t-CO_2	5.8	5.9	5.9	5.8	6.4
	ST subsidiaries	million t-CO_2	1.2	1.1	1.2	1.2	2.0
	EN Gr	million t-CO_2	0.0418	0.0263	0.0232	0.0189	0.0359
	SH Gr	million t-CO_2	0.0319	0.0316	0.0311	0.0298	0.0316
Unit CO_2 emissions (numerator: Scope 1 and 2 total; denominator: sales)	All	t-CO_2e/billion yen	135.2	106.5	105.5	105.0	114.6

*1 Scope of data: Calculated based on the operational control approach as defined by the GHG Protocol. Since FY2025, the figures include data for an expanded list comprising major subsidiaries of JFE Steel, JFE Engineering, and JFE Shoji, bringing the total to 205 companies.
JFE Holdings
- JFE Steel, 118 major subsidiaries, and 2 equity-method affiliates in Japan and overseas
- JFE Engineering and 22 major subsidiaries in Japan and overseas
- JFE Shoji and 59 major subsidiaries in Japan and overseas

*2 The item covered only CO_2 emissions up to FY2024. Greenhouse gases other than CO_2 were included in the calculation starting in FY2025.
*3 Due to adjustments for transactions among Group companies, the sum of the figures for each company in FY2025 does not match the total figure for all companies.
*4 Non-consolidated data for JFE Steel was calculated based on the Japan Iron and Steel Federation's Carbon Neutrality Action Plan up to FY2024 and on the GHG Protocol from FY2025.
*5 Calculated based on the market-based method.

Breakdown of GHG Emissions of the JFE Group (Scope 1, 2)

Item		Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
CO_2 emissions and denominator (Scope 1 and 2 total)	CO_2 emissions	All	million t-CO_2	59.0	56.1	54.6	51.0	51.9
	CO_2 emissions (denominator: crude steel production)	ST	t-CO_2/t-steel	2.03	2.09	2.06	2.06	2.18
GHG emissions other than CO_2*	Methane (CH_4)	All	million t-CO_2e	0.1	0.04	0.1	0.2	0.05
	N_2O	All	million t-CO_2e	0.03	0.02	0.04	0.04	0.04

*Scope of data: JFE Steel and one major overseas subsidiary.

GHG Emissions of the JFE Group (Scope 3)

Item	Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
Scope 3*[1, 2]	All	kt-CO_2e	20,778	23,184	22,701	21,894	28,217
Category 1 Purchased goods and services	All	kt-CO_2e	17,244	19,750	19,118	18,537	13,726
Category 2 Capital goods	All	kt-CO_2e	1,221	1,166	1,239	1,127	1,159
Category 3 Fuel- and energy-related activities not included in Scope 1 or 2	All	kt-CO_2e	717	736	760	723	888
Category 4 Upstream transportation and delivery	All	kt-CO_2e	454	450	440	434	2,699
Category 5 Waste generated in operations	All	kt-CO_2e	58	62	133	147	75
Category 6 Business travel	All	kt-CO_2e	5	4	5	5	8
Category 7 Employee commuting	All	kt-CO_2e	59	49	14	14	19
Category 15 Investments	All	kt-CO_2e	1,022	967	993	906	9,639

*1 Scope of data: Since FY2025, the figures include data for an expanded list comprising major subsidiaries of JFE Steel, JFE Engineering, and JFE Shoji.
(Categories 1, 3, 4, 5, 7)
JFE Holdings, JFE Steel, JFE Steel's 25 major subsidiaries in Japan, JFE Engineering, JFE Engineering's one major subsidiary in Japan, and JFE Shoji
(Categories 2, 6)
JFE Holdings, JFE Steel, JFE Steel's 127 consolidated subsidiaries, JFE Engineering, JFE Engineering's 89 consolidated subsidiaries, JFE Shoji, and JFE Shoji's 109 consolidated subsidiaries
(Category 15)
Japan Marine United, and JFE Steel's 37 equity-method affiliates (14 in Japan and 23 overseas)
*2 Sources: Green Value Chain Platform (Ministry of the Environment) and others.

Contribution to GHG Reductions in the Engineering Business

Item	Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
Contribution to GHG emission reductions*	EN Gr	Million t-CO_2e/year	10.57	11.14	11.53	12.00	12.91
Biomass power generation	EN Gr	Million t-CO_2e/year	2.86	2.94	2.95	3.12	3.57
Waste power generation	EN Gr	Million t-CO_2e/year	3.40	3.72	3.80	3.60	3.80
Others (digestion gas, geothermal, solar power, wind, waste heat recovery, fuel conversion, energy services, biomass silo, logistics products)	EN Gr	Million t-CO_2e/year	3.57	3.59	3.84	4.43	4.61
Recycling (includes fluorocarbon recovery and energy creation)	EN Gr	Million t-CO_2e/year	0.74	0.89	0.94	0.85	0.92

*Scope of data: Includes JFE Engineering's businesses in Japan and overseas, J&T Recycling Corporation, JFE Urban Recycle Corporation, and German subsidiary Standardkessel Baumgarte GmbH (SBG).

Energy Consumption

Item		Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
Energy consumption and unit energy consumption	Energy consumption*1	All	PJ	654	627	612	567	575
		ST Gr	PJ	652	625	611	566	573
		ST	PJ	602	581	557	519	518
		ST subsidiaries	PJ	49.6	43.9	53.9	46.5	128
		EN Gr	PJ	1.3	1.2	1.2	1.1	1.7
		SH Gr	PJ	0.7	0.7	0.7	0.6	0.7
	Unit energy consumption (crude steel production)	ST	GJ/t-steel	23.3	24.1	23.7	23.6	24.2
Recovered energy for recycling*2	Supplied to society	ST	%	38	37	39	40	0.1
	Consumed internally	ST	%	62	63	61	60	93

*1 Due to adjustments for transactions among Group companies, the sum of the figures for each company does not match the total figure for all companies.
*2 The FY2025 figures were calculated using a revised method.

Modal Shift

Item		Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
All transportation	Ship and rail	ST	%	58.3	59.0	57.9	58.7	59.2
	Truck	ST	%	41.7	41.0	42.1	41.3	40.8
Transportation of a distance of 500 km or more	Ship and rail	ST	%	90.0	92.1	93.6	94.8	94.8
	Truck	ST	%	10.0	7.9	6.4	5.2	5.2

Scope of calculation: All products and half-finished products transported in Japan.

Chemical Substances

Air Emissions

Item	Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
SOx emissions*1, 3	ST Gr	kt	10.0	9.6	10.3	10.0	10.5
	ST	kt	9.9	9.5	10.2	9.9	10.4
	ST subsidiaries	kt	0.06	0.08	0.08	0.08	0.08
NOx emissions*1, 2	ST Gr	kt	23.5	21.1	20.8	20.5	21.5
	ST	kt	23	20.7	20.4	20.1	20.8
	ST subsidiaries	kt	0.5	0.4	0.4	0.4	0.7
Soot and dust	ST	kt	1.2	0.9	0.8	0.7	0.8

*1 10 JFE Steel's consolidated subsidiaries in Japan.
*2 9 JFE Steel's consolidated subsidiaries in Japan.
*3 The unit of measurement has been changed from million Nm³ to thousand tonnes.

Discharge to Waterways

Item	Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
COD (chemical oxygen demand)	All*1	t/day	3.1	3.1	2.6	2.5	2.4
	ST	t/day	2.9	2.8	2.3	2.4	2.3
	ST subsidiaries	t/day	0.23	0.25	0.27	0.09	0.04
	EN*2	kg/day	8.4	6.6	4.8	5.8	9.2

*1 Scope of data: 10 companies (JFE Steel and its 8 consolidated subsidiaries in Japan, and JFE Engineering)
*2 This report uses the maximum value of each year.

PRTR-Registered Substances

Item		Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
PRTR-registered substances*1, 2	Amount released	All	t	827	750	917	810*3	739
		ST Gr	t	672	609	790	731*3	670
		ST	t	380	366	510	471	420
		ST subsidiaries	t	292	243	280	260*3	250
		EN Gr	t	155	141	126	79	69
	Amount transferred	All*4	t	9,845	12,809	11,217	11,074*3	7,487
		ST Gr	t	9,811	12,779	11,193	11,049*3	7,440
		ST	t	1,378	1,278	1,192	1,836	964
		ST subsidiaries	t	8,433	11,501	10,001	9,213*3	6,777
		EN Gr	t	34	30	23	25	47
VOC emissions		ST	t	542	513	528	475	441
Benzene emissions		ST	t	16	17	16	11	14
Dichloromethane emissions		ST	t	30	25	25	19	22

*1 Scope of data:
- JFE Steel and 16 consolidated subsidiaries in Japan
- JFE Engineering and 3 consolidated subsidiaries in Japan

*2 Excluding dioxins.

*3 Revised the prior year data to increase accuracy.

*4 JFE Shoji is not included in the scope of the report, as the company is not subject to PRTR registration.

Use of Natural Resources

Input and Products Supplied

Item		Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
Input	Raw materials for steel production	ST	million t	63.4	60.4	56.1	52.4	51.5
	Iron ore	ST	million t	37.6	35.7	33.4	30.9	30.4
	Coal	ST	million t	19.9	19.1	17.5	16.2	15.8
	Lime	ST	million t	5.9	5.6	5.2	5.3	5.3
	Recycled materials (steel scrap)	ST	million t	1.2	0.9	0.8	1.1	1.0
	Raw materials	EN	kt	38.6	27.9	24.0	35.3	44.3
Products supplied	Steel products	ST	million t	25.9	24.2	23.4	21.9	21.4
	Engineering	EN	kt	37.4	27.0	23.0	29.7	35.0

Co-Products Generated by the Steel Business

Item		Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
Co-products	Amount generated*1	ST Gr	million t	14.4	14.1	13.3	12.6	12.5
		ST*2	million t	13.9	13.5	12.7	12.0	11.9
		ST subsidiaries	million t	0.5	0.6	0.6	0.6	0.6
	Amount recycled internally	ST	million t	3.3	2.9	2.9	2.7	2.8
	Internal recycling rate	ST	%	24.0	21.7	22.4	22.8	23.1
	Emissions*1	ST Gr	million t	10.8	10.8	10.1	9.5	9.3
		ST	million t	10.6	10.6	9.9	9.3	9.1
		ST subsidiaries	million t	0.2	0.2	0.2	0.2	0.1
	Used by local communities	ST	million t	10.5	10.5	9.8	9.2	9.1
	Rate of local community use	ST	%	75.7	77.8	77.0	76.6	76.5
	Landfill amount*1	ST Gr	million t	0.094	0.167	0.180	0.146	0.094
		ST	million t	0.042	0.073	0.083	0.063	0.044
		ST subsidiaries	million t	0.052	0.094	0.097	0.083	0.050
	Recycling rate	ST	%	99.7	99.5	99.4	99.5	99.6

*1 Scope of data: JFE Steel and 22 consolidated subsidiaries in Japan.

*2 Byproducts generated by JFE Steel are mostly reused as offshore, land, or construction materials.

Waste Generated by the Engineering Business

Item			Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
Waste	Emissions		EN Gr	kt	249.2	223.7	193.1	151.4	172.0
		Offices	EN	t	235.3	259.4	219.4	263.0	323.9
		Production	EN	t	803.0	821.4	705.8	1,571.7	1,157.7
		Construction	EN	t	190,242.3	162,747.2	134,157.5	60,269.0	85,260.6
		Subsidiaries	EN subsidiaries	t	57,960.3	59,841.4	57,990.0	89,319.6	85,300.9
	Recycling rate (offices)		EN	%	96.1	96.4	92.1	93.0	93.8
	Recycling rate (production)		EN	%	46.8	54.0	50.4	53.9	24.4
	Recycling rate (construction)		EN	%	98.6	99.3	97.5	97.3	95.5
	Landfill		EN	t	3,035.6	1,456.7	3,497.5	1,956.9	4,305.5
		Offices	EN	t	7.4	7.7	7.4	13.3	14.3
		Production	EN	t	322.6	287.7	235.2	344.3	625.0
		Construction	EN	t	2,705.6	1,161.3	3,254.8	1,599.3	3,666.2
	Recycling rate		EN	%	96.5	97.4	96.1	92.6	90.7

*Scope of data: JFE Engineering and 10 consolidated subsidiaries in Japan.

Waste at JFE Engineering Construction Sites

Item		Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
Rubble	Amount generated	EN	t	159,309	141,888	119,708	46,853	53,634
	Recycling rate	EN	%	99.4	99.9	97.8	99.6	97.7
	Landfill amount	EN	t	940	173	2,632	189	1,223
Sludge	Amount generated	EN	t	24,350	14,806	9,679	4,827	19,083
	Recycling rate	EN	%	96.9	99.0	99.3	97.1	99.4
	Landfill amount	EN	t	683	130	56	104	113
Industrial waste excluding rubble and sludge	Amount generated	EN	t	6,583	6,054	4,771	8,589	12,544
	Recycling rate	EN	%	81.6	84.4	87.1	83.9	66.8
	Landfill amount	EN	t	1,083	858	566	1,307	2,331

Paper Consumption at JFE Shoji

Item	Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
Consumption of copier paper	SH	boxes	3,033	2,860	2,934	3,089	2,717
	Tokyo	boxes	1,471	1,376	1,396	1,374	1,149
	Osaka	boxes	337	351	391	679	654
	Nagoya	boxes	154	177	162	165	181
	Branch	boxes	1,071	956	985	871	733

Water Use

Water Intake and Discharge

Item	Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
Amount of water intake*1	All	million t	246	240	225	228	226
	ST Gr	million t	245	239	224	227	224
	ST	million t	226	220	208	210	208
	ST subsidiaries	million t	18.7	18.2	16.1	16.5	16.7
	EN Gr	million t	1.141	1.35	1.24	1.36	1.69
	SH Gr	million t	0.154	0.154	0.144	0.143	0.134
Amount of water discharged*2	ST Gr	million t	144	143	139	137	135
	ST	million t	128	128	125	124	121
	ST subsidiaries	million t	15.6	15.4	13.9	13.3	13.6
	EN	million t	0.132	0.122	0.122	0.107	0.088
Amount of water consumption*2	ST Gr	million t	3,442	3,475	3,242	2,974	2,890
	ST	million t	3,207	3,242	3,035	2,748	2,672
	ST subsidiaries	million t	235	233	207	226	218
Amount evaporated	ST	million t	98	92	83	76	87
Ratio of amount released and evaporated	ST	%	7.0	6.8	6.9	7.3	7.8
Amount recycled*2	ST Gr	million t	3,197	3,237	3,017	2,747	2,666
	ST	million t	2,981	3,022	2,826	2,538	2,465
	ST subsidiaries	million t	216	215	191	209	201
Recycling rate*2, 3	ST	%	93.0	93.2	93.1	92.4	92.2
	ST subsidiaries	%	92	92	92	93	92

*1 Scope of data:
- JFE Steel and 22 consolidated subsidiaries in Japan
- JFE Engineering and 5 consolidated subsidiaries in Japan
- JFE Shoji's 35 domestic and overseas consolidated subsidiaries

*2 Scope of data: JFE Steel and 22 JFE Steel consolidated subsidiaries in Japan.

*3 Industrial water circulated (%) = (Total amount – industrial water accepted)/total amount used × 100

Breakdown of Water Intake and Discharge Areas

Item	Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
Total intake	2 operating companies*	million t	226.1	220.4	208.4	210.1	207.7
River / lake		million t	0	0	0	0	0
Groundwater		million t	0	0	0	0	0
Industrial water / waterworks		million t	226.1	220.4	208.4	210.1	207.7
Ocean		million t	0	0	0	0	0
Rainwater		million t	0	0	0	0	0
Other intake source		million t	0	0	0	0	0
Total discharge	2 operating companies*	million t	128.8	128.5	125.8	124.3	121.8
Ocean		million t	128.3	128.1	125.4	123.9	121.4
Surface water		million t	0	0	0	0	0
Underground / well		million t	0	0	0	0	0
Off-site water processing		million t	0.4709	0.4300	0.4158	0.4168	0.3903
Beneficial use / other use		million t	0	0	0	0	0
Other discharge destinations		million t	0	0	0	0	0

*Scope of data: JFE Steel and JFE Engineering

Environmental Management

Environmental Management System

Item		Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
ISO 14001 certification coverage rate	Base	All	%	54	52	52	52	52
		ST Gr	%	18	44	44	44	42
		EN Gr	%	8	44	43	43	47
		SH Gr	%	27	64	64	64	64
	Employees	All	%	68	67	72	66	63
		ST Gr	%	72	70	72	71	64
		EN Gr	%	50	50	47	48	50
		SH Gr	%	83	81	80	78	78
Environmental audit (number of sites)		ST Gr	sites	29	28	27	25	26
		EN Gr	sites	52	50	52	53	46
Environmental education conducted (total participants)		EN Gr	persons	1,131	889	897	1,282	771

Environmental Accounting

Breakdown of environmental protection cost		FY2023		FY2024		FY2025	
		Investment (billion yen)	Cost (billion yen)	Investment (billion yen)	Cost (billion yen)	Investment (billion yen)	Cost (billion yen)
Management	Impact monitoring and measurement, and EMS expenses and education	1.2	2.4	0.1	2.8	0.2	28
Global warming countermeasures	Saving and efficiently using energy	19.5	36.5	6.3	36.0	3.8	30.2
	Recycling industrial water	4.9	25.7	2.0	22.6	1.5	24.1
Conservation of natural resources	Recycling and waste management of internally generated materials, etc.	0	5.7	7.1	5.2	0.4	5.9
Environmental protection	Air pollution countermeasures	6.9	30.7	6.0	28.2	4.0	29.6
	Water pollution countermeasures	1.8	11.5	3.3	14.9	1.5	15.5
	Prevention of soil contamination, noise, vibration, and subsidence	0	0.5	0	0.5	0	0.5
Other	Charges, etc.	—	1.4	—	0.7	—	0.2
R&D	Technologies for protecting the environment, saving energy, and preventing global warming	1.0	9.4	1.2	17.9	1.2	29.6
Social activities	Support for nature preservation and forestation, information disclosure, exhibitions, and public relations	—	0.7	—	0.8	—	0.8
Total		35.2	124.4	26.2	129.6	12.6	139.2

Scope of data: All investment activities of JFE Steel Corporation and R&D activities of JFE Engineering Corporation.

Environmental Accounting (Accumulated)

Item	Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
Energy-saving investment (accumulated)	All	Billion yen	565.4	570.8	590.3	596.6	600.5
Environmental protection investment (accumulated)	All	Billion yen	770.9	797.1	811.9	830.6	838.2

Social Data

Human Capital

Employee Data (FY2025[*1])

Items	Scope	Unit	JFE Steel	JFE Engineering	JFE Shoji
Employees	Consolidated[*2]	persons	41,654	11,170	8,744
Male		persons	36,164	9,408	5,600
Female		persons	5,490	1,762	2,301
Management positions[*3]		persons	11,606	2,348	1,908
Male		persons	10,673	2,018	1,578
Female		persons	933	330	330
Ratio of women in management positions		%	8.0	14.1	17.3
Employees	Non-consolidated	persons	14,747	3,833	1,001
Male		persons	13,461	3,259	595
Female		persons	1,286	574	406
Management positions (manager or higher)[*3]		persons	1,573	582	605
Male		persons	1,530	558	523
Female		persons	43	24	82
Ratio of women in management positions		%	2.7	4.1	13.6
Recruits	Non-consolidated	persons	653	267	66
Male		persons	590	232	38
Female		persons	63	35	28
New graduates		persons	501	142	35
Mid-career professionals		persons	152	125	31
Years of continuous employment (average)		years	17.3	15.6	13.4
Male		years	17.0	15.6	13.5
Female		years	20.0	15.6	13.3
Job turnover rate[*4] (total 2.3%)		%	2.2	2.7	3.1

Items	Scope	Unit	JFE Steel	JFE Engineering	JFE Shoji
Elderly employees*5	Non-consolidated	persons	936	55	21
Ratio of elderly employees*5		%	6.35	1.43	2.10
Average annual leave taken		day/year	17.1	19.1	15.9
Average overtime		hours/ month	24.4	18.2	28.8
Employees working shorter hours for childcare		persons	87	63	59
Ratio of male employees taking childcare leave*6		%	98.2	95.0	96.7
Average childcare leave taken by male employees		days	40.2	64.6	38.4
Wage gap between men and women*7 (all workers)		%	83.0	69.2	70.9
Full-time employees		%	83.2	70.1	70.7
Part-time workers and fixed-term employees		%	73.6	58.9	79.5
Temporary staff		persons	138	652	31

*1 Personnel composition (excluding managers, temporary staff, and employees working shorter hours for childcare) is as of March 31, 2026. Number of managers, temporary staff, and employees working shorter hours for childcare is as of April 1, 2026, and other personnel as of FY2025.

*2 Scope of data: Operating companies and other consolidated subsidiaries, JFE Steel: 121, JFE Engineering: 83, and JFE Shoji: 98. JFE Shoji's America region is excluded from the gender breakdown. The number of managers is also excluded from the scope of data.

*3 Management positions at JFE Shoji include employees on loan.

*4 Percentage of employees who voluntarily choose to resign from the organization.

*5 Figures for JFE Steel and JFE Engineering include active employees who are age 60 and above (the companies' mandatory retirement age has been raised to 65).

*6 Rate of male employees taking childcare leave or time off related to child rearing = (Number of male employees who took childcare leave + Number of male employees who used the childcare leave program for pre-elementary school children) / Number of male employees whose spouses have given birth.

*7 Calculated in accordance with the provisions of the Act on the Promotion of Women's Active Engagement in Professional Life.

Recruiting*1, 2

Items	Unit	Career-track Positions			On-site Positions at Steelworks	Total
		White-collar	Technical	Total		
Total	persons	188	380	568	418	986
Male	persons	113	350	463	397	860
Female	persons	75	30	105	21	126
Ratio of women	%	39.9	7.9	18.5	5.0	12.8

*1 Scope of data: Total figures for the three operating companies.

*2 Target group: New graduates who joined in FY2026 and mid-career professionals who joined in FY2025.

Employment of People with Disabilities (as of June 1 of Each Year)

Items	Scope	Unit	2021	2022	2023	2024	2025
Employment ratio of people with disabilities	JFE Steel	%	2.51	2.57	2.52	2.63	2.38
	JFE Engineering	%	2.53	2.58	2.69	2.83	2.81
	JFE Shoji	%	2.39	2.66	2.74	2.84	2.58

Human Resource Development

Items	Scope	Unit	FY2022	FY2023	FY2024	FY2025
Total annual training hours	Total of three operating companies	million hours per year	0.79	0.77	0.78	0.79
Training hours per employee	JFE Steel	hours per year	45.2	44.9	45.2	44.7
	JFE Engineering	hours per year	20.9	23.4	24.2	29.1
	JFE Shoji	hours per year	20.1	22.1	25.2	25.2
DX human resource development (accumulated)	JFE Steel (business innovators)	persons	—	—	—	20
	JFE Steel (data scientists)	persons	—	610	662	698
	JFE Steel (digital designers)*	persons	—	456	630	113*
	JFE Engineering	persons	—	179	207	247

*The name and definition were changed.

Lost-Work Injuries and Accidents

Items		Scope*1	Unit	2021	2022	2023	2024	2025
Lost-work Injuries and Severity (Rates)	Lost-work injuries*2	JFE Steel	—	0.10	0.18	0.06	0.15	0.08
	Severity*3		—	0.08	0.08	0.00	0.08	0.05
	Lost-work injuries*2	JFE Engineering	—	0.56	0.26	0.28	0.22	0.38
	Severity*3		—	0.40	0.01	0.42	0.01	0.02
	Lost-work injuries*2	JFE Shoji Group	—	0.60	0.25	0.12	0.37	0.75
	Severity*3		—	0.05	0.02	0.03	0.02	0.02
	Lost-work injuries*2	Manufacturing industry average	—	1.31	1.25	1.29	1.30	1.33
	Severity*3		—	0.06	0.08	0.08	0.06	0.07

Items		Scope*1	Unit	2021	2022	2023	2024	2025
Number of lost-work injuries	Lost-work injuries	JFE Group	cases	26	25	12	21	19
	Fatal injuries		cases	2	1	1	0	0
	Lost-work injuries	JFE Steel	cases	10	18	6	14	7
	Fatal injuries		cases	1	1	0	0	0
	Lost-work injuries	JFE Engineering	cases	11	5	5	4	6
	Fatal injuries		cases	1	0	1	0	0
	Lost-work injuries	JFE Shoji Group	cases	5	2	1	3	6
	Fatal injuries		cases	0	0	0	0	0
Lost-work injuries involving employees	Lost-work injuries	JFE Group	cases	10	13	6	3	9
	Fatal injuries		cases	0	1	0	0	0
	Lost-work injuries	JFE Steel	cases	5	11	4	2	4
	Fatal injuries		cases	0	1	0	0	0
	Lost-work injuries	JFE Engineering	cases	1	0	1	0	1
	Fatal injuries		cases	0	0	0	0	0
	Lost-work injuries	JFE Shoji Group	cases	4	2	1	1	4
	Fatal injuries		cases	0	0	0	0	0
Lost-work injuries involving employees of contractors	Lost-work injuries	JFE Group	cases	16	12	6	18	10
	Fatal injuries		cases	2	0	1	0	0
	Lost-work injuries	JFE Steel	cases	5	7	2	12	3
	Fatal injuries		cases	1	0	0	0	0
	Lost-work injuries	JFE Engineering	cases	10	5	4	4	5
	Fatal injuries		cases	1	0	1	0	0
	Lost-work injuries	JFE Shoji Group	cases	1	0	0	2	2
	Fatal injuries		cases	0	0	0	0	0

*1 Scope of data:

- JFE Steel and JFE Engineering: parent company, business associates and contractors in Japan.
- JFE Shoji: parent and consolidated subsidiaries, business associates and contractors in Japan.

*2 Lost-work injuries (rate) = number of employees with lost-work injuries/total working hours × 1,000,000

*3 Severity = number of lost working days/total working hours × 1,000

Health and Safety Training (FY2025)

Items	Unit	Participants*
Training for managers and supervisors	persons	471
Mental healthcare education for new hires and at rank-based training	persons	1,627

* Total of 3 operating companies.

Occupational Health and Safety

Items	Scope	Unit	FY2022	FY2023	FY2024	FY2025
Ratio of ISO 45001-certified sites*	JFE Steel	%	100	100	100	100
	JFE Engineering	%	100	100	67	67

* Ratio at production sites

Health

Items	Scope	Unit	FY2021	FY2022	FY2023	FY2024	FY2025
Provision rate of health guidance*1	JFE Steel	%	72.2	71.1	72.7	69.8	—
	JFE Engineering	%	39.4	42.7	41.3	45.2	—
	JFE Shoji	%	52.1	35.0	43.0	74.8	—
Smoking rates	JFE Steel*2	%	27.3	26.6	25.8	25.0	23.1
	JFE Engineering	%	22.9	22.3	21.8	21.4	21.3
	JFE Shoji	%	21.5	21.9	20.6	21.4	20.9
Metabolic syndrome rates	Employees insured by the JFE Group's health insurance union (age 40 and above)	%	36.3	36.0	36.3	36.3	37.0
Rate of health examination for dependents	Age 40 and above	%	51.3	52.3	53.8	56.9	54.7

*1 Figures for FY2025 will be added once they are finalized.

*2 Smoking rate for JFE Steel is managed based on calendar year.

Provide Quality Products and Enhance Customer Satisfaction

Customer Training (FY2025)

Training type	Scope	Unit	Participants
Technical presentation by overseas Group companies (number of participating companies*1)	JFE Shoji	persons (companies)	181(19)
National staff training (NS training*2)	JFE Shoji	persons	27

*1 A total of 181 persons from 10 countries participated in the training, with 28 attending face-to-face sessions and 153 online.
*2 Participants came from 11 countries (U.S.A., India, Indonesia, Canada, Thailand, Philippines, Vietnam, Malaysia, Myanmar, Mexico, and China).

Community

Social Contributions (FY2025)

Activities		Scope		Unit	Results
Spending on social contribution activities		JFE Holdings and operating companies		Million yen	740
Internships		JFE Group		Persons	1,903
			JFE Steel	persons	770
			JFE Engineering	persons	754
			JFE Shoji	persons	379
Supporting schools in Ghana and Nigeria	Desks and chairs	JFE Shoji		sets	320
	Notebooks			books	17,000
	Canned foods			cans	12,500

JFE 21st Century Foundation

Grants		Projects	Value (million yen)
Technology research (accumulated)		794	159,580
Technology research for FY2025	Iron and steel technology research	8	1,600
	Global environment and global warming prevention technology research	20	4,000
Asian history studies (accumulated)		198	29,700
Asian history studies for FY2025		12	1,800

Activities	Sets Donated
Supporting the Japan Overseas Educational Services Writing Contest and anthology donation (to elementary and middle schools and also public libraries in the regions related to steel*)	2,000

*Donated to 650 elementary schools and middle schools, 60 libraries, etc.

Governance Data

Corporate Governance

Data on Corporate Governance System (as of July 1, 2026)

Item		System Overview
Organizational design type		Company with Board of Directors and an Audit & Supervisory Committee
Number of Directors		13
	Number of Independent Outside Directors	6
	Number of female Directors	2
Number of Directors (Audit & Supervisory Committee Members)		5
	Number of independent Outside Directors (Audit & Supervisory Committee Members)	3
	Number of female Directors (Audit & Supervisory Committee Members)	1
Term for Directors (years) Term for Outside Directors (Audit & Supervisory Committee Members) (years)		1
Term for (Audit & Supervisory Committee Members) (years)		2
Term for Outside Directors (Audit & Supervisory Committee Members) (years)		1
Corporate Officer System		Adopted
Voluntary advisory committees of the Board of Directors		Nomination Committee and Remuneration Committee

Directors (as of July 1, 2026)

Position		Name	Significant Concurrent Post	Independent Executive	Number of Meetings of the Board of Directors Attended in FY2025	Number of Meetings of the Audit & Supervisory Board / Audit & Supervisory Committee Attended in FY2025	Number of Meetings of the Nomination Committee Attended in FY2025	Number of Meetings of the Remuneration Committee Attended in FY2025
Director	Inside	Yoshihisa Kitano	Chairman of the Board of Directors of JFE 21st Century Foundation (Public Interest Incorporated Foundation)	—	15/15 (100%)	—	3/3 (100%)	5/5 (100%)
		Masayuki Hirose	Representative Director, President and CEO of JFE Steel Corporation	—	15/15 (100%)	—	3/3 (100%)	—
		Toshihiro Tanaka	Director of JFE Steel Corporation, Representative Director of JFE 21st Century Foundation (Public Interest Incorporated Foundation)	—	—	—	—	—
		Kazuyoshi Fukuda	Representative Director, President and CEO of JFE Engineering Corporation	—	15/15 (100%)	—	—	—
		Yoshifumi Ubagai	Representative Director, President and CEO of JFE Shoji Corporation	—	12/12 (100%)	—	—	—

Directors (as of July 1, 2026)

Position		Name	Significant Concurrent Post	Independent Executive	Number of Meetings of the Board of Directors Attended in FY2025	Number of Meetings of the Audit & Supervisory Board / Audit & Supervisory Committee Attended in FY2025	Number of Meetings of the Nomination Committee Attended in FY2025	Number of Meetings of the Remuneration Committee Attended in FY2025
Director	Outside	Yoshiko Ando	Outside Director of Kirin Holding Company, Limited Outside Director of Sansei Technologies, Inc.	○	15/15 (100%)	—	3/3 (100%)	—
		Takuya Shimamura	Outside Director of EBARA Corporation	○	15/15 (100%)	Audit & Supervisory Board 6/6 (100%)	3/3 (100%)	4/4 (100%)
		Keiichi Kobayashi	Outside Director, NTT DATA Group Corporation, Outside Director, Toray Industries, Inc.	○	14/15 (93%)	—	—	5/5 (100%)
Director Serving as a Member of the Audit & Supervisory Committee	Inside	Nobuya Hara	Audit & Supervisory Board Member of JFE Steel Corporation	—	15/15 (100%)	Audit & Supervisory Board 6/6 (100%) Audit & Supervisory Committee 14/14 (100%	—	—
		Nakaba Akimoto	Audit & Supervisory Board Member of JFE Engineering Corporation Audit & Supervisory Board Member of JFE Shoji Corporation	—	15/15 (100%)	Audit & Supervisory Board 6/6 (100%) Audit & Supervisory Committee 14/14 (100%)	—	—
	Outside	Tsuyoshi Numagami	Professor, Institute for Business and Finance, Waseda University Outside Director of Tokyo Century Corporation Outside Director of EBARA Corporation	○	15/15 (100%)	Audit & Supervisory Board 6/6 (100%) Audit & Supervisory Committee 14/14 (100%)	3/3 (100%)	5/5 (100%)
		Yoshihisa Suzuki	Outside Director of the Board of Kyowa Kirin Co., Ltd. Outside Director, OMRON Corporation	○	12/12 (100%)	Audit & Supervisory Committee 14/14 (100%)	—	—
		Naoto Nakamura	Lawyer, Nakamura Law Firm	○	12/12 (100%)	Audit & Supervisory Committee 14/14 (100%)	—	4/4 (100%)

*1 JFE Holdings, Inc. transitioned to a company with an Audit & Supervisory Committee upon the conclusion of the Ordinary General Meeting of Shareholders held on June 25, 2025. As part of this transition, Mr. Takuya Shimamura stepped down as an Audit & Supervisory Board Member and was appointed as Director on the same date. In addition, Mr. Noboya Hara, Mr. Nakaba Akimoto, and Mr. Tsuyoshi Numagami stepped down as Audit & Supervisory Board Members and were appointed as Directors serving as Members of the Audit & Supervisory Committee on the same date. Attendance data for Audit & Supervisory Board meetings correspond to the period prior to the transition, while attendance data for Audit & Supervisory Committee meetings correspond to the period following the transition.

*2 Mr. Yoshifumi Ubagai, Mr. Yoshihisa Suzuki, and Mr. Naoto Nakamura were elected for the first time as Directors at the previous year's Ordinary General Meeting of Shareholders, held on June 25, 2025, and therefore attended fewer Board of Directors meetings than the other Directors.

*3 Mr. Takuya Shimamura and Mr. Naoto Nakamura became Members of the Remuneration Committee on June 25, 2025, and therefore attended fewer meetings than the other Members.

*4 Mr. Masashi Terahata stepped down as Director upon the conclusion of the Ordinary General Meeting of Shareholders held on June 25, 2025. He attended all 15 Board of Directors meetings in FY2025, with an attendance rate of 100%. In addition, he attended all 5 Remuneration Committee meetings in FY2025, with an attendance rate of 100%.

Data on Nomination Committee and Remuneration Committee (as of July 1, 2026)

Item	Members	Chairperson	Number of Meetings in FY2025
Nomination Committee	6	Takuya Shimamura (Outside Director)	3
Inside Director	2		
Outside Director	2		
Outside Director (Audit & Supervisory Committee Member)	2		
Remuneration Committee	6	Keiichi Kobayashi (Outside Director)	5
Inside Director	2		
Outside Director	2		
Outside Director (Audit & Supervisory Committee Member)	2		

Data on Operating System

Committee	Company	Chairperson	Attendees
Group Management Strategy Committee	JFE Holdings	President	Inside Directors (including 3 operating company Presidents), Corporate Officers
Management Committee	JFE Holdings	President	Inside Directors (excluding 3 operating company Presidents), Corporate Officers*
	Each operating company	President	Directors, major Corporate Officers, and Audit & Supervisory Committee Members

*Presidents of operating companies and senior executives from operating companies attend as necessary.

Data on Executive Remuneration (FY2025)

Executive Remuneration

Position Type	Total Remuneration, etc. (million yen)	Total Amount by Remuneration Type (million yen)*1				Number of Executives (Members)
		Basic Remuneration	Bonus	Stock Remuneration*2, 3		
				Linked to Performance	Linked to Service Length	
Directors (excluding Directors serving as Audit & Supervisory Committee Members and Outside Directors)	260,840	217,415	19,680	11,554	12,191	6
Directors serving as Audit & Supervisory Committee Members (excluding Outside Directors)	58,680	58,680	—	—	—	2
Audit & Supervisory Committee Members (excluding Outside Audit & Supervisory Committee Members)*1	19,655	19,655	—	—	—	2
Outside Directors / Audit & Supervisory Committee Members	111,687	111,687	—	—	—	8

*1 JFE Holdings, Inc. transitioned to a company with an Audit & Supervisory Committee upon the conclusion of the Ordinary General Meeting of Shareholders held on June 25, 2025. Remuneration for Audit & Supervisory Board Members corresponds to the period prior to the transition, while remuneration for Audit & Supervisory Committee Members corresponds to the period following the transition.

*2 Performance-linked remuneration for Directors (excluding Outside Directors) is composed of bonus and stock remuneration. The total amount of performance-linked remuneration for the current fiscal year is 31.233 million yen.

*3 Only directors (excluding Outside Directors) are included in the scope of the above-mentioned stock remuneration, and the entire amount is paid in the form of non-monetary remuneration. The total amount of stock remuneration expensed for the current fiscal year as non-monetary remuneration is 23.744 million yen.

Segment Profit	
Segment	FY2025 (billion yen)
Steel	38.0
Engineering	23.9
Trading	40.2
JFE Holdings	110.5

Achievement Levels for ESG Performance			
Company	Safety (%)	Climate Change (%)	Employee Engagement (%)
JFE Steel	120	120	80
JFE Engineering	43	100	110
JFE Shoji	0	100	90
JFE Holdings	54	114	93

Actual Performance of Metrics for Calculating Stock-Based Compensation		
Metrics	Actual	Achievement Level
ROE	2.7%	0%
Relative TSR*	0.84	68%

*Calculated based on JFE Holdings' TSR of 170% and the TOPIX Index's TSR of 202% over the past 5 years, including dividends.

Officers Whose Consolidated Remuneration Exceeded 100 Million Yen								
Name	Position	Company	Total (Consolidated Basis) (million yen)	Per Company (Consolidated Basis) (million yen)	Total Amount by Remuneration Type (million yen)			
					Basic Remuneration	Bonus	Stock Remuneration	
							Linked to Performance	Linked to Service Length
Yoshihisa Kitano	Director	JFE Holdings	149,204	149,204	120,047	12,450	7,998	8,708
Masayuki Hirose	Director	JFE Holdings	133,599	12,000	12,000	—	—	—
	Director	JFE Steel		121,599	104,893	—	7,998	8,708

Ratio of Remuneration Components		
Basic remuneration: fixed	Annual bonus: linked to short-term performance	Stock remuneration: linked to medium- to long-term performance
2	1	1

Note: The ratios above are applicable only when the company's president has achieved the performance target goals.

Data on Internal Control System (as of July 1, 2026)

Internal Control System			
Item		Number of Companies	Number of People Assigned
Internal audit	Internal audit organization	62	187
Audit by Audit & Supervisory Committee	Full-time Audit & Supervisory Committee Members	30	36
	Dispatched Audit & Supervisory Committee Members (part-time Audit & Supervisory Committee Members)	47	13

Cooperation of Audit & Supervisory Committee Members	
Item	Number of Meetings in FY2025
Accounting auditor	10
Internal Audit Department	16

Note: Data on internal audit is as of April 1, 2026.

Compliance

Whistleblowing

			FY2024 (cases)	FY2025 (cases)
Cases handled by the Corporate Ethics Hotline and the harassment consultation desk			314	305
	Cases of compliance violations identified Note: Corrective measures have been implemented for all cases. Cases where investigation and countermeasures are ongoing as of March 31, 2026, are excluded.		178	140
		Harassment	82	81
		Bribery	0	0
		Violation of Antimonopoly Act	0	0

Political Contributions

Item	FY2023(million yen)	FY2024(million yen)	FY2025(million yen)
Political contribution	13.0	13.0	10.0

Note: Political contributions are handled appropriately in accordance with Japan's Political Funds Control Act.

Independent Practitioner's Limited Assurance Report

SUSA
Sustainability Accounting Co.,Ltd.

Independent Practitioner's Limited Assurance Report

September 14, 2026

Mr. Yoshihisa Kitano
Representative Director, President and CEO of JFE Holdings, Inc.

1. Purpose

We, Sustainability Accounting Co., Ltd., have been engaged by JFE Holdings, Inc., ("the Company") to provide limited assurance on the following data of the Company group*1 during the fiscal year 2025: 50.0 million t-CO_2e for Scope 1, 1.9 million t-CO_2 for location-based Scope 2, 2.0 million t-CO_2 for market-based Scope 2, 28.2 million t-CO_2e for Scope 3 (Categories 1, 2, 3, 4, 5, 6, 7, 15), 575 PJ of energy consumption, 226 million tonnes of water intake, 9.3 million tonnes of co-products emissions of JFE Steel Group*1, and 0.17 million tonnes of waste emissions of JFE Engineering Corporation*1 (collectively, "the Environmental performance indicators"). The purpose of this process is to express our conclusion on whether the Environmental performance indicators were calculated in accordance with the Company's standards. The Company's management is responsible for calculating the Environmental performance indicators. Our responsibility is to independently carry out a limited assurance engagement and to express our assurance conclusion.

*1 The number of companies in the aggregation for each data is listed in the ESG Data of the JFE Group Sustainability Report 2026

2. Procedures Performed

We conducted our assurance engagement in accordance with International Standard on Assurance Engagement 3000 (ISAE 3000) and International Standard on Assurance Engagement 3410 (ISAE 3410). The key procedures we carried out included:

- Reviewing the Company's standards
- Interviewing the Company's responsible personnel to understand the Company's standards
- Performing cross-checks on a sample basis and performing recalculation to determine whether the Environmental performance indicators were calculated in accordance with the Company's standards.

3. Conclusion

Based on the procedures performed, nothing has come to our attention that causes us to believe that the Environmental performance indicators have not been calculated in all material respects in accordance with the Company's standards.

We have no conflict of interest with the Company.

Takashi Fukushima
Representative Director
Sustainability Accounting Co., Ltd.
2-4, Kojimachi, Chiyoda-ku,
Tokyo, Japan

External ESG Evaluations

JFE Holdings is highly regarded by ESG evaluation organizations in Japan and overseas.

FTSE JPX Blossom Japan Index (Invested in by the GPIF)

JFE Holdings has been selected as a constituent of the FTSE JPX Blossom Japan Index, an investment index provided by FTSE Russell. The index selects companies that demonstrate strong environmental, social, and governance (ESG) practices and is used in the creation or assessment of sustainable investment funds and other financial products.

FTSE JPX Blossom Japan Index

FTSE JPX Blossom Japan Sector Relative Index (Invested in by the GPIF)

JFE Holdings is a constituent of the FTSE JPX Blossom Japan Sector Relative Index, an investment index provided by FTSE Russell. It refers to the ESG assessment made by FTSE Russell as a base and reflects management practices toward climate change risks and opportunities for some constituents that have high carbon intensity (GHG emissions per unit of revenue).

FTSE JPX Blossom Japan Sector Relative Index

FTSE4Good Index Series

JFE Holdings has been selected as a constituent of the FTSE4Good Index Series, an investment index provided by FTSE Russell. This comprehensive ESG index in general applies the same ESG assessment scheme as that used for the FTSE JPX Blossom Japan Index. Constituents have high absolute ESG ratings and are screened from major stocks around the world.

FTSE4Good

Note: FTSE Russell confirms that JFE Holdings, Inc. has been independently assessed according to the index criteria and has satisfied the requirements to become a constituent of the FTSE JPX Blossom Japan Index, the FTSE JPX Blossom Japan Sector Relative Index, and FTSE4Good Index Series. Created by the global index and data provider FTSE Russell, they are designed to measure the performance of companies demonstrating specific environmental, social, and governance (ESG) practices. They are used by a wide variety of market participants to create and assess responsible investment funds and other products.

MSCI Nihonkabu ESG Select Leaders Index (Invested in by the GPIF)

JFE Holdings has been selected as a constituent of the MSCI Nihonkabu ESG Select Leaders Index, an investment index provided by MSCI Inc. The index is based on MSCI's ESG research, which is used by over 1,000 companies around the world. This comprehensive ESG index reflects ESG risks to the market portfolio and is comprised of constituents with relatively high ESG evaluation within the industry.

2026 CONSTITUENT MSCI NIHONKABU ESG SELECT LEADERS INDEX

MSCI Selection Indexes

JFE Holdings, Inc. is included in the MSCI Selection Indexes, provided by MSCI Inc. and targeting major global companies. Constituents are selected based on MSCI's ESG research to include companies with higher ESG ratings within their particular industry.

MSCI Selection Indexes Constituents 2026

Note: THE INCLUSION OF JFE Holdings, Inc. IN ANY MSCI INDEX, AND THE USE OF MSCI LOGOS, TRADEMARKS, SERVICE MARKS OR INDEX NAMES HEREIN, DO NOT CONSTITUTE A SPONSORSHIP, ENDORSEMENT OR PROMOTION OF JFE Holdings, Inc. BY MSCI OR ANY OF ITS AFFILIATES. THE MSCI INDEXES ARE THE EXCLUSIVE PROPERTY OF MSCI. MSCI AND THE MSCI INDEX NAMES AND LOGOS ARE TRADEMARKS OR SERVICE MARKS OF MSCI OR ITS AFFILIATES.

S&P/JPX Carbon Efficient Index (Invested in by the GPIF)

JFE Holdings has been selected as a constituent of the S&P/JPX Carbon Efficient Index, jointly developed by S&P Dow Jones Indices and the Japan Exchange Group. The weighting of constituents in the index is determined by the status of corporate disclosure for environmental information and the level of carbon efficiency, or carbon emissions per unit of revenue.

S&P/JPX Carbon Efficient Index

Morningstar Japan ex-REIT Gender Diversity Tilt Index (Invested in by the GPIF)

JFE Holdings is a constituent of the Morningstar Japan ex-REIT Gender Diversity Tilt Index provided by Morningstar, Inc. This index is based on the data and evaluation methods of Equileap and is designed to facilitate investment prioritizing companies that have established gender diversity policies embedded in their corporate culture and companies committed to providing equal opportunities for employees regardless of gender.

SOMPO Sustainability Index

JFE Holdings has been selected for 14 consecutive years as a constituent of the SOMPO Sustainability Index (former: SNAM Sustainability Index), which was launched by Sompo Asset Management Co., Ltd. The index, which comprises companies with highly regarded ESG ratings, contributes to investor asset formation by evaluating corporate value from a long-term perspective.

2026 Sompo Sustainability Index

Evaluation Based on CDP 2025

Established in Britain in 2000, the Carbon Disclosure Project (CDP) is a nongovernmental organization that conducts ESG evaluations. It calls on companies to disclose ESG-related information by responding to CDP questionnaires to facilitate ESG investment decisions by institutional investors. Currently, the CDP covers these environmental areas: climate change, water security, forests, plastics, biodiversity, and oceans, and companies are rated on an eight-point scale (from A to D–) for each. The volume of information collected by the CDP has become one of the largest in the world, with over 2,100 companies in Japan responding to the questionnaires in 2024, which are widely used in various indexes by institutional investors and for socially responsible investment. The JFE Group actively participates in CDP initiatives and responds to questionnaires on climate change and water security every year. Our high rating reflects our complete disclosure of appropriate information for the CDP 2025 questionnaire.

*CDP 2025 score: climate change: B, water security: A–, supplier engagement: A

2026 Certified Health and Productivity Management Outstanding Organizations Recognition Program

JFE Holdings, JFE Steel, JFE Engineering, and JFE Shoji participate in Japan's Ministry of Economy, Trade and Industry's health management survey, designed to objectively assess initiatives to promote employee health. All four companies have also been certified as 2026 Outstanding Organizations in Health and Productivity Management in recognition of their health management practices in collaboration with health insurers.

DBJ Employees' Health Management Rated Loan Program

The DBJ Employees' Health Management Rated Loan Program is the world's first financing menu that bases loan conditions on DBJ's proprietary system for rating health management for the purpose of selecting and evaluating companies based on their performance in this area.

JFE Holdings' efforts in pursuing employee health management has been highly regarded, and it is rated as a top-ranking company under the program.

DBJ Environmentally Rated Loan Program

The Development Bank of Japan (DBJ) Environmentally Rated Loan Program uses a screening (rating) system developed by DBJ to evaluate environmental management and then assign a corresponding interest rate from three levels. This was the world's first loan program to incorporate environmental ratings in its financing menus. In March 2016, JFE Holdings was rated as a top-ranking company that pursues excellent and advanced environmental initiatives resulting in outstanding environmental-management performance, based on which the company secured a loan under the program.

Platinum Kurumin Certification

JFE Engineering was recognized as a company that excels in supporting childcare and obtained the Platinum Kurumin certification from Japan's Ministry of Health, Labour and Welfare on December 10, 2025.

External Evaluations of Non-ESG Areas

Noteworthy DX Company 2026

JFE Holdings was the only company in the iron and steel industry to be selected as a Noteworthy DX Company 2026, under the Digital Transformation Stock Selection (DX Stock) program organized by Japan's Ministry of Economy, Trade and Industry, the Tokyo Stock Exchange, and the Innovation Platform Agency.

From about 3,800 companies listed on the Tokyo Stock Exchange, the program identifies those that continue to take on ambitious challenges to transform their business models and management practices based on digital technologies and have undertaken noteworthy initiatives, particularly in terms of their contribution to corporate value. These companies are recognized as Noteworthy DX Companies.

JFE Steel completed the large-scale migration of its core steelworks systems to an open platform by the end of FY2025 to establish its data utilization infrastructure. In addition, it is promoting initiatives to create new value by combining intangible assets, such as operational data and expertise accumulated through many years of business activities, with cutting-edge technologies including AI, IoT, and data science. Furthermore, the JFE Group has been highly regarded for its extensive DX initiatives across its companies, which include leveraging AI to enhance productivity and advance the technological sophistication of its operations, expanding its solutions business, and developing DX talent.

External Awards

Recognized as an Environmentally Sustainable Company at the 7th ESG Finance Awards Japan

JFE Holdings was selected as an Environmentally Sustainable Company* in the Environmentally Sustainable Companies Category in the 7th ESG Finance Awards Japan, presented by the Ministry of the Environment.

ESG Finance Awards Japan was founded to disseminate and expand ESG finance by commending and widely sharing the initiatives of institutional investors, financial institutions, intermediaries, and companies that have made an outstanding impact by proactively engaging in ESG finance as well as environmental and social projects. JFE Holdings received a special recognition at the second ESG Finance Awards Japan in FY2020 and was selected as an Environmentally Sustainable Company at the third, fourth, and sixth awards in FY2021, FY2022, and FY2024. It also received the Bronze Award as well as selection as an Environmentally Sustainable Company at the fifth awards in FY2023.

This year, we disclosed our newly formulated long-term vision JFE Vision 2035 and our initiatives on environmental sustainability under the Eighth Medium-term Business Plan, which is the growth strategy designed to achieve the vision. As part of this information, we highlighted our efforts to address climate change, including our financial impact assessment in the TCFD scenario analysis and our policy engagement, the transition to a circular economy, and our biodiversity conservation and nature-positive initiatives. We believe that recognition of these activities led to our selection.

*The Environment Sustainable Category provides investors and companies with concrete examples of businesses that incorporate significant environmental opportunities and risks into their management strategies to enhance corporate value and develop positive environmental benefits while creating that value. Those selected under the category as Environmentally Sustainable Companies meet specific standards for information disclosure.

Please see the following for further details.

> **JFE Group Selected as an Environmentally Sustainable Company at 7th ESG Finance Awards Japan (Japanese only)**
(https://www.jfe-holdings.co.jp/release/2026/0217/001864/)

World Steel Association 2026 Steel Sustainability Champions

JFE Steel was selected as the 2026 Steel Sustainability Champion by the World Steel Association.

Once a year, the association commends member companies for demonstrating leadership in developing a sustainable steel industry and society and achieving outstanding results in enhancing sustainability.

The JFE Group has been developing innovative technologies to mitigate environmental impact and published the JFE Group Environmental Vision for 2050. We inform stakeholders about our sustainability policies and achievements across a range of areas, including environment, human rights, health and safety, through publications such as the JFE Group Sustainability Report. These endeavors were recognized with the award for the sixth consecutive year.

Looking ahead, we plan to continue contributing to achieve the Sustainable Development Goals (SDGs) by strengthening our sustainability management practices and working to help resolve environmental and other issues in society through business.

Please see the following for further details.

> **JFE Steel Recognized as 2026 Steel Sustainability Champion (Japanese only)**
(https://www.jfe-steel.co.jp/release/2026/04/260423.html)

Dissemination and Exchange of Environmental Information

Awards for Technologies and Product Development (FY2025)

	Prize / Award	Project	Sponsor
JFE Steel	FY2025 Climate Change Action Minister of the Environment Award	Development of alkali-activated material (AAM) concrete that reduces CO_2 emissions while efficiently using resources	Ministry of the Environment
	FY2025 Energy Conservation Grand Prize Minister of Economy, Trade and Industry Grand Prize, Energy Conservation Best Practices Category	Energy conservation initiative through the development of highly thermally efficient, long-life radiant tube burners	Energy Conservation Center Japan
	60th Machinery Promotion Award Chairman's Prize	Robotic system capable of autonomously grinding out surface defects on steel pipes	Japan Society for the Promotion of Machine Industry
	3rd National Marine Restoration and Blue Infrastructure Awards Waterfront Vitalization and Environment Research Foundation Award	Project for creating a seaweed bed using recycled materials in areas around Shinto, Iwakuni City, Yamaguchi Prefecture (Koujiro Fisheries Cooperative, Iwakuni City, National Institute of Technology, Ube College, and JFE Steel)	Waterfront Vitalization and Environment Research Foundation
	FY2025 Otani Art Museum Award Award of Excellence	Development of Matt Dull (MD), a new stainless steel finish with a milky white color and matt luster that offers superior aesthetic qualities	Otani Art Museum Foundation
	72nd (FY2025) Okochi Memorial Technology Prize	Development of highly formable, high-strength alloyed hot-dip galvanized steel sheets that contribute to reducing automobile weight	Okochi Memorial Foundation
	10th Monodzukuri Nippon Grand Award Minister of Economy, Trade and Industry Award	Development of sour-resistant line pipes that meet ultra-strict specifications by reducing center segregation and hardness in the outermost layer	Ministry of Economy, Trade and Industry; Ministry of Land, Infrastructure, Transport and Tourism; Ministry of Health, Labour and Welfare; Ministry of Education, Culture, Sports, Science and Technology
	FY2026 Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology Science and Technology Award (Development Category)	Development of a new formula for calculating crack tip opening displacement (CTOD), a measure of fracture toughness, that contributes to ISO international standards	Ministry of Education, Culture, Sports, Science and Technology
JFE Engineering	Cogeneration Award 2025 Technology Development Category Award for Excellence	Commercialization of a 45 vol% hydrogen co-firing gas engine cogeneration system with the same output as a 100% city gas-fired system	Advanced Cogeneration and Energy Utilization Center Japan



FY2025 Climate Change Action, Minister of the Environment Award



FY2025 Energy Conservation Grand Prize, Energy Conservation Best Practices Category: Minister of Economy, Trade and Industry Award



60th Machinery Promotion Award, Chairman's Prize



3rd National Marine Restoration and Blue Infrastructure Awards, Waterfront Vitalization and Environment Research Foundation Award



FY2025 Otani Art Museum Award, Award of Excellence



72nd (FY2025) Okochi Memorial Technology Prize



10th Monodzukuri Nippon Grand Award, Minister of Economy, Trade and Industry Award



Cogeneration Award 2025, Award for Excellence in the Technology Development Category

Third-Party Comments

Yoshinao Kozuma

Emeritus Professor
Sophia University

1. Sustainable Corporate Growth Model



This report explains the status of progress on the Company's JFE Vision 2035 and Eighth Medium-term Business Plan, which makes it all too clear that the essence of environmental challenges, such as achieving carbon neutrality by 2050, transitioning to a circular economy, and conserving biodiversity and restoring nature, involves more than physically decarbonizing business activities, promoting resource circulation, and coexisting with natural capital. It lies in transitioning to a sustainable corporate growth model suited to such a society. In climate change countermeasures alone, the Company makes it abundantly clear that it is addressing environmental challenges as an integral part of its business strategy. This can be seen in its multi-track approach of promoting innovative electric arc furnaces, hydrogen-based direct reduction technology, and carbon-recycling blast furnaces while following a clearly defined policy of balancing environmental and economic value in their implementation, introducing internal carbon pricing as a tool for evaluating the economic rationality of its GX investments, and advancing policy engagement to expand and develop the GX steel market. This creates a strong impression that all these activities are closely linked to the JFE Group's growth strategy within a sustainable economy and represents a major environmental achievement for FY2025.

2. Raising the Targets for Building a Talent Portfolio

On the social front, the Company has addressed its goal of establishing a talent portfolio for achieving management strategies, as proposed in its Eighth Medium-term Business Plan, by significantly raising the FY2026 targets for developing talent capable of supporting key strategies, such as overseas operations and promotion of DX. The FY2026 target for the percentage of male employees taking paternity leave has also been raised to promote DEI. The changes made to these targets indicate a strengthening of KPI management related to talent portfolio development and are commendable aspects of the Company's initiatives in FY2025.

3. Changes in Corporate Governance Structure and Governance Reforms

In terms of governance, significant changes have been made to the corporate governance structure. JFE Holdings has transitioned to a company with an Audit & Supervisory Committee, with the aim of strengthening, in an integrated manner, human capital, technological development, and governance, which constitute the infrastructure for addressing environmental challenges. Furthermore, in response to this transition and to expedite management decision-making, the Company also revised the criteria for submitting matters to the Board of Directors along with the board's operational procedures. Additionally, chief compliance officers were appointed at the holding company and operating companies, and chief financial officers and chief technology officers were appointed at the operating companies, significantly strengthening the governance system. This was another achievement for FY2025.

4. Future Challenges

Unlike the Company's environmental data, for which the scope of aggregation is being expanded and adjusted, much of its social data is still aggregated on a non-consolidated basis, which remains an issue to be rectified. The Company must align the reporting boundaries for financial and non-financial data at an early stage to clarify how sustainability risks and opportunities are linked to the financial statements and ensure proper disclosure of the actual process of long-term value creation. Moreover, with regard to workplace accidents, which are also a human rights issue, the lost-time injury frequency rate (KPI) has consistently failed to meet some of the targets over the years; more effective countermeasures should therefore be considered.

Mariko Kawaguchi

Specially appointed professor of the Graduate School of Social Design Studies, Rikkyo University



This is the tenth year I have been invited to provide a third-party opinion. Much can change in ten years, and this period has coincided with a transformative decade in which sustainability issues have been integrated into the global economy and business management. The JFE Group has played a leading role throughout this period. Starting with its pioneering TCFD disclosures, the Group laid out its Environmental Vision 2050 as an ultra-long-term goal for achieving carbon neutrality, followed by JFE Vision 2035, which outlines the strategy of becoming the top runner in carbon neutrality technology development, and the medium-term business plans that serve as the tactical framework for integrating the Group's initiatives into daily operations.

By effectively leveraging this three-tiered structure of goals, strategies, and tactics, the JFE Group has steadfastly advanced decarbonization and the transition to a circular economy in its steel business as well as in various social infrastructures. Initially, I was not entirely convinced of the feasibility of these "moonshot" targets. However, the Company has been investing steadily to advance the development of highly challenging technologies such as innovative electric arc furnaces, hydrogen-based ironmaking, and carbon-recycling blast furnaces, and it has built a track record of reducing GHG emissions at a pace that exceeds the targets set in its medium-term business plans toward achieving JFE Vision 2035. It is also reassuring to see that, as in its decarbonization efforts, the Company's performance in resource recovery and recycling is generally progressing smoothly.

Furthermore, in this year's Message from the CEO, President Kitano clearly stated that meeting social challenges is at the heart of the JFE Group's mission, and that addressing environmental challenges, such as decarbonization, the transition to a circular economy, and biodiversity conservation and nature-positive initiatives, is the very foundation of the JFE Group's future business and a key management strategy for sustainable growth and enhancing corporate value. If so, developing businesses that directly contribute to corporate value will become crucial. I believe this is underscored by the inclusion of initiatives for three key areas in the new medium-term business plan, and the appointment of chief technology officers at the operating companies to strengthen technological development.

This report provides detailed information for each operating company on specific risks and opportunities related to climate change and biodiversity along the value chain based on the TCFD and TNFD frameworks, which helps readers grasp both the big picture and specific initiatives. Furthermore, the disclosure of the use of short- and long-term internal carbon pricing suggests that environmental constraints are actually being integrated into the Company's business management. For investors, this provides insight into business risks and opportunities, while for employees it serves as a guide that shows them how their daily work is linked to environmental management, which at times can seem quite abstract, and I hope it will boost motivation.

With regard to initiatives on biodiversity, the Company has recognized water-related risks as a key issue and has clarified its commitment to addressing the urgent need to prepare for increasingly severe natural disasters and to develop nature-positive technologies. The fact that each business site is steadily implementing diverse activities for biodiversity conservation tailored to the characteristics of its region and operations is further evidence that biodiversity is being internalized as a personal concern at each worksite.

Compared to a year ago, we are seeing a significant increase in the severity of climate-related disasters such as the massive flooding in Nepal this summer caused by melting glaciers and frequent torrential rains causing disasters across Japan, as well as resource constraints arising from geopolitical risks such as the closure of the Strait of Hormuz. From the perspective of national energy and resource security, there are growing expectations for societal decarbonization and resource-recycling businesses, and the Company's efforts to realize its long-term vision have become aligned with the pressing needs of society. And while disaster prevention, as a means of adapting to climate change, is expected to become even more urgent than mitigation, the Earth itself demands an absolute reduction in carbon emissions rather than enhancements in carbon productivity.

Therefore, my hope is that the JFE Group will accelerate its decarbonization initiatives and further integrate its efforts on climate change, resource recycling, and biodiversity. I envisage the development of a comprehensive green infrastructure system that integrates GX steel, recycled resources such as plastics, and natural capital including forests and wetlands. This would establish a resilient infrastructure that draws on the wisdom of indigenous peoples and our ancestors to combine the strengths of iron, a mineral resource, with biological resources such as wood and plants.

Even the assessments of environmental risks and opportunities rated as medium or low in this report may change as environmental conditions continue to deteriorate, with particular concern that risks may increase. This will require a flexible approach, including a review of the carbon pricing disclosed by the Company.

The stakeholder engagement section of this report outlines the initiatives undertaken for each stakeholder group. For the supply chain, it describes initiatives involving direct business partners. In addition, the Company conducts human rights training for suppliers and has begun collaborating with external organizations on mechanisms for human rights remediation. Given this situation, why not incorporate the workers, local residents, and Indigenous peoples upstream in the supply chain into the list of supply chain stakeholders and comprehensively address their concerns?

In the human capital disclosures, the Company is implementing improvement measures based on an analysis of the results of its employee engagement survey. A variety of measures have been proposed, ranging from those that can be addressed through revisions to personnel systems to long-term initiatives focused on changing the employee mindset and corporate culture. I hope the Company will take a long-term perspective and proceed steadily with these initiatives.

Last year I wrote, "I hope that many employees will emerge who understand both sustainability considerations and corporate value enhancement and can translate that understanding into their work." This year, the examples of technology and biodiversity projects presented in this report offer a vivid picture of on-site staff working with enthusiasm and ingenuity. I look forward to seeing everyone from top management to on-site staff continue to work toward building a safe, secure, and sustainable social infrastructure that is in harmony with the Earth, treating this as their own mission.

Editorial Policy

Basic Approach

This report provides stakeholders with a comprehensive account of the JFE Group's sustainability-related initiatives and data and elicits feedback toward enhancing the Company's activities and information disclosure. The 2026 report was compiled with a focus on the following.

- Progress of the Eighth Medium-term Business Plan, KPI performance for FY2025, and KPIs for FY2026
- Status of initiatives addressing climate change, including our approach to environmental investment, development of ultra-innovative process technology, review of the financial impact of carbon pricing, and internal carbon pricing
- Policy engagement for addressing climate change
- Expansion of the scope of GHG emissions accounting toward disclosing information in accordance with standards of the Sustainability Standards Board of Japan (SSBJ)
- Status of initiatives addressing the transition to a circular economy, including expanded marketing of eco-products and eco-solutions
- Information disclosure on biodiversity conservation and nature-positive initiatives in line with TNFD guidance
- Mid- to long-term human resources strategies, including the latest initiatives for development of human resources, improvement in work engagement, and promotion of diversity, equity, and inclusion (DEI)
- Measures to enhance corporate governance, including reinforcing the governance system
- Status of human rights due diligence initiatives and future direction

Scope of Report

Reporting Period

FY2025 (April 1, 2025 to March 31, 2026)
Reports on some activities undertaken before or after this period are included.

Organization Covered

The report mainly covers the activities of JFE Holdings, Inc. and its three operating companies: JFE Steel Corporation, JFE Engineering Corporation, and JFE Shoji Corporation. It also includes reports on activities of other companies in the JFE Group (424 companies, of which 328 are consolidated subsidiaries and 96 are equity-method affiliates). Quantitative information on the environment includes data from the following JFE Group operating companies.

ST JFE Steel Group: JFE Steel Corporation, 23 domestic and overseas consolidated subsidiaries, 2 equity-method affiliates, and 95 other companies (total: 121 companies)

JFE Bars & Shapes Corporation, JFE Chemical Corporation, JFE Metal Products & Engineering Inc., JFE Galvanizing & Coating Co., Ltd., JFE Logistics Corporation, JFE Container Co., Ltd., JFE Civil Engineering & Construction Corp., JFE Mineral & Alloy Company, Ltd., JFE Life Corporation, JFE Plant Engineering Co., Ltd., JFE Systems, Inc., JFE Kozai Corporation, JFE Welded Pipe Manufacturing Co., Ltd., JFE Precision Corporation, JFE Advantech Co., Ltd., JFE Techno-Research Corporation, JFE East Japan GS Co., Ltd., JFE West Japan GS Co., Ltd., JFE Steel Australia Resources Pty Ltd., Philippine Sinter Corporation, PT. JFE Steel Galvanizing Indonesia, JFE Steel Galvanizing (Thailand) Ltd., Nova Era Silicon S.A., K. K. JFE Sanso Center*, Setouchi Joint Thermal Power Co., Ltd.*

*Equity-method affiliates

EN JFE Engineering Group: JFE Engineering Corporation, 7 domestic and overseas consolidated subsidiaries, and 16 other companies (total: 24 companies)

JFE Plant Technology Co., Ltd., J&T Recycling Corporation, JFE Project One Co., Ltd., JFE Environment Technology Co., Ltd., Asuka Soken Co., Ltd., JFE Technos Co., Ltd., Kinpai Co., Ltd.

SH JFE Shoji Group: JFE Shoji Corporation, 17 domestic and overseas consolidated subsidiaries, and 42 other companies (total: 60 companies)

JFE Shoji Steel Construction Materials Corp., JFE Shoji Electronics Corporation, Kawasho Foods Corporation, JFE Shoji Pipe & Fitting Corporation, JFE Shoji Electrical Steel Co., Ltd., JFE Shoji Kohnan Steel Center Co., Ltd., JFE Shoji Coil Center Corporation, K&I Tubular Corporation, JFE Shoji Machinery & Materials Corporation, Zhejiang JFE Shoji Steel Products Co., Ltd., Guangzhou JFE Shoji Steel Products Co., Ltd., PT. JFE Shoji Steel Indonesia, Dongguan JFE Shoji Steel Products Co., Ltd., Central Metals (Thailand) Ltd., JFE Shoji Steel Philippines, Inc., JFE Shoji Power Canada Inc., Vest Tube, LLC

Reference Guidelines

GRI Sustainability Reporting Standards 2016, 2018, 2019, 2020, and 2021
Ministry of the Environment (Japan): Environmental Reporting Guidelines 2018
Ministry of the Environment (Japan): Environmental Accounting Guidelines 2005
Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)
Recommendations of the Task Force on Nature-related Financial Disclosures (TNFD)

Publication Date

Website: September 2026, PDF file: September 2026
(previous report: September 2025; next report: scheduled for September 2027)

Related Reports

The following information is available at:
> **https://www.jfe-holdings.co.jp/en/**

Company Information

Outline of the JFE Group, corporate governance, etc.

Shareholder and Investor Information

JFE Group business information, financial data, stock and rating information, etc.

JFE Group Report (Integrated Report)

Financial information including the JFE Group's mid- to long-term business strategies, business performance, management strategies, and non-financial information, including initiatives on sustainability and corporate governance.

Guidelines Content Index

GRI content index

GRI 1: Foundation 2021

Statement of use	The JFE Group has reported the information cited in this GRI content index for the period from April 1, 2025 to March 31, 2026 with reference to the GRI Standards.
GRI 1 used	GRI 1: Foundation 2021

Note: We refer to the JFE GROUP REPORT 2026 (Integrated Report), Securities Report from April 1, 2025 to March 31, 2026, and Corporate Governance Report published on June 24, 2026.

Disclosure		Location	
		Sustainability report	Other
GRI 2: General Disclosures 2021			
2-1	Organizational details	—	Outline of JFE Holdings (https://www.jfe-holdings.co.jp/en/company/info/) Global Network (https://www.jfe-holdings.co.jp/en/g-about/global.html)
2-2	Entities included in the organization's sustainability reporting	Editorial Policy (P.308)	—
2-3	Reporting period, frequency and contact point	Editorial Policy (P.308) Submit Comments on the JFE Group Sustainability Report (Japanese Only) (https://frlb.f.msgs.jp/webapp/form/25459_frlb_1/index.do)	Contact Us (https://www.jfe-holdings.co.jp/en/contact.html)
2-4	Restatements of information	Environmental Data (P.273) Social Data (P.286)	—
2-5	External assurance	Independent Practitioner's Limited Assurance Report (P.297)	—
2-6	Activities, value chain and other business relationships	Policy Engagement (P.89) JFE Group Value Chain (P.28)	JFE GROUP REPORT (Integrated Report): P.46-48
2-7	Employees	Social Data (P.286)	JFE GROUP REPORT (Integrated Report): P.84
2-8	Workers who are not employees	—	—
2-9	Governance structure and composition	Corporate Governance (P.248) Social Data (P.286)	—
2-10	Nomination and selection of the highest governance body	Corporate Governance (P.248)	JFE GROUP REPORT (Integrated Report): P.70-72
2-11	Chair of the highest governance body	—	Corporate Governance Report: P.17
2-12	Role of the highest governance body in overseeing the management of impacts	Sustainability Management (P.10) Environmental Management (P.45) Human Rights (P.212) Risk Management (P.269)	Securities Report: P.23-34
2-13	Delegation of responsibility for managing impacts	Sustainability Management (P.10)	—
2-14	Role of the highest governance body in sustainability reporting	Sustainability Management (P.10)	—
2-15	Conflicts of interest	Corporate Governance (P.248)	Corporate Governance Report: P.17-18

Disclosure		Location	
		Sustainability report	Other
2-16	Communication of critical concerns	> **Compliance** (P.263)	—
2-17	Collective knowledge of the highest governance body	—	—
2-18	Evaluation of the performance of the highest governance body	> **Corporate Governance** (P.248)	—
2-19	Remuneration policies	> **Corporate Governance** (P.248)	JFE GROUP REPORT (Integrated Report): P.75
2-20	Process to determine remuneration	—	JFE GROUP REPORT (Integrated Report): P.75-76
2-21	Annual total compensation ratio	—	—
2-22	Statement on sustainable development strategy	> **Message from the CEO** (P.1)	JFE GROUP REPORT (Integrated Report): P.8-15
2-23	Policy commitments	> **Human Rights** (P.212)	JFE GROUP REPORT (Integrated Report): P.80-81
2-24	Embedding policy commitments	> **Supply Chain Management** (P.233) > **Environmental Management** (P.45) > **Human Rights** (P.212) > **Compliance** (P.263) > **Corporate Governance** (P.248) > **Risk Management** (P.269)	—
2-25	Processes to remediate negative impacts	> **Human Rights** (P.212) > **Compliance** (P.263)	—
2-26	Mechanisms for seeking advice and raising concerns	—	—
2-27	Compliance with laws and regulations	> **Environmental Management Activities** (P.180) > **Compliance** (P.263)	—
2-28	Membership associations	> **Policy Engagement** (P.89)	—
2-29	Approach to stakeholder engagement	> **Sustainability Management** (P.10)	—
2-30	Collective bargaining agreements	> **Human Rights** (P.212)	—
GRI 3: Material Topics 2021			
3-1	Process to determine material topics	> **Sustainability Management** (P.10)	—
3-2	List of material topics	> **Sustainability Management** (P.10)	—
3-3	Management of material topics	> **Sustainability Management** (P.10) > **Supply Chain Management** (P.233) > **Environmental Management** (P.45) > **Initiatives to Address Climate Change** (P.49) > **Identification and Assessment of Risks and Opportunities (TCFD Scenario Analysis)** (P.113) > **Initiatives to Transition to a Circular Economy** (P.126) > **Biodiversity Conservation and Nature Positive** (P.154) > **Providing Quality Products and Enhancing Customer Satisfaction** (P.226) > **Occupational Health and Safety** (P.202) > **Promoting Diversity, Equity and Inclusion (DEI)** (P.190) > **Promoting Talent Acquisition and Development** (P.188) > **Improving Work Engagement** (P.195)	—

Disclosure		Location	
		Sustainability report	Other
GRI 101: Biodiversity 2024			
101-1	Policies to halt and reverse biodiversity loss	> **Biodiversity Conservation and Nature Positive** (P.154)	—
101-2	Management of biodiversity impacts	> **Biodiversity Conservation and Nature Positive** (P.154)	—
101-3	Access and benefit-sharing	—	—
101-4	Identification of biodiversity impacts	> **Biodiversity Conservation and Nature Positive** (P.154)	—
101-5	Locations with biodiversity impacts	> **Biodiversity Conservation and Nature Positive** (P.154)	—
101-6	Direct drivers of biodiversity loss	> **Biodiversity Conservation and Nature Positive** (P.154)	—
101-7	Changes to the state of biodiversity	—	—
101-8	Ecosystem services	—	—
GRI 201: Economic Performance 2016			
201-1	Direct economic value generated and distributed	> **Environmental Management Activities** (P.180) > **Community** (P.235)	Securities Report: P.2, 71, 119, 126
201-2	Financial implications and other risks and opportunities due to climate change	> **Identification and Assessment of Risks and Opportunities (TCFD Scenario Analysis)** (P.113) > **Environmental Management Activities** (P.180)	—
201-3	Defined benefit plan obligations and other retirement plans	—	Securities Report: P.140, 168
201-4	Financial assistance received from government	—	—
GRI 202: Market Presence 2016			
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	—	—
202-2	Proportion of senior management hired from the local community	—	—
GRI 203: Indirect Economic Impacts 2016			
203-1	Infrastructure investments and services supported	> **Environmental Management Activities** (P.180) > **Community** (P.235)	—
203-2	Significant indirect economic impacts	> **Message from the CEO** (P.1) > **JFE Group Value Chain** (P.28) > **Sustainability Management** (P.10) > **Initiatives to Address Climate Change** (P.49)	—
GRI 204: Procurement Practices 2016			
204-1	Proportion of spending on local suppliers	—	—
GRI 205: Anti-corruption 2016			
205-1	Operations assessed for risks related to corruption	—	—
205-2	Communication and training about anti-corruption policies and procedures	> **Compliance** (P.263)	—

Disclosure		Location	
		Sustainability report	Other
205-3	Confirmed incidents of corruption and actions taken	> **Compliance** (P.263)	—
GRI 206: Anti-competitive Behavior 2016			
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	> **Compliance** (P.263)	—
GRI 207: Tax 2019			
207-1	Approach to tax	> **Compliance** (P.263)	—
207-2	Tax governance, control, and risk management	—	—
207-3	Stakeholder engagement and management of concerns related to tax	—	—
207-4	Country-by-country reporting	—	—
GRI 301: Materials 2016			
301-1	Materials used by weight or volume	> **Environmental Data** (P.273)	—
301-2	Recycled input materials used	> **Initiatives to Transition to a Circular Economy** (P.126) > **Environmental Data** (P.273)	—
301-3	Reclaimed products and their packaging materials	> **Initiatives to Transition to a Circular Economy** (P.126) > **Environmental Data** (P.273)	—
GRI 302: Energy 2016			
302-1	Energy consumption within the organization	> **Initiatives to Address Climate Change** (P.49) > **Environmental Data** (P.273)	—
302-2	Energy consumption outside of the organization	—	—
302-3	Energy intensity	> **Initiatives to Address Climate Change** (P.49) > **Environmental Data** (P.273)	—
302-4	Reduction of energy consumption	> **Initiatives to Address Climate Change** (P.49) > **Environmental Data** (P.273)	—
302-5	Reductions in energy requirements of products and services	> **Policy Engagement** (P.89)	—
GRI 303: Water and Effluents 2018			
303-1	Interactions with water as a shared resource	> **Biodiversity Conservation and Nature Positive** (P.154)	—
303-2	Management of water discharge-related impacts	> **Initiatives to Transition to a Circular Economy** (P.126) > **Environmental Data** (P.273)	—
303-3	Water withdrawal	> **Biodiversity Conservation and Nature Positive** (P.154) > **Environmental Data** (P.273)	—
303-4	Water discharge	> **Environmental Data** (P.273)	—
303-5	Water consumption	> **Biodiversity Conservation and Nature Positive** (P.154) > **Environmental Data** (P.273)	—

Disclosure		Location	
		Sustainability report	Other
GRI 305: Emissions 2016			
305-1	Direct (Scope 1) GHG emissions	> **Initiatives to Address Climate Change** (P.49) > **Environmental Data** (P.273)	—
305-2	Energy indirect (Scope 2) GHG emissions	> **Initiatives to Address Climate Change** (P.49) > **Environmental Data** (P.273)	—
305-3	Other indirect (Scope 3) GHG emissions	> **Initiatives to Address Climate Change** (P.49) > **Environmental Data** (P.273)	—
305-4	GHG emissions intensity	> **Initiatives to Address Climate Change** (P.49) > **Environmental Data** (P.273)	—
305-5	Reduction of GHG emissions	> **Initiatives to Address Climate Change** (P.49) > **Environmental Data** (P.273)	—
305-6	Emissions of ozone-depleting substances (ODS)	—	—
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	> **Environmental Management Activities** (P.180) > **Environmental Data** (P.273)	—
GRI 306: Effluents and Waste 2016			
306-3	Significant spills	—	—
GRI 306: Waste 2020			
306-1	Waste generation and significant waste-related impacts	> **Environmental Data** (P.273)	—
306-2	Management of significant waste-related impacts	> **Initiatives to Transition to a Circular Economy** (P.126) > **Environmental Data** (P.273)	—
306-3	Waste generated	> **Initiatives to Transition to a Circular Economy** (P.126) > **Environmental Data** (P.273)	—
306-4	Waste diverted from disposal	> **Initiatives to Transition to a Circular Economy** (P.126) > **Environmental Data** (P.273)	—
306-5	Waste directed to disposal	> **Initiatives to Transition to a Circular Economy** (P.126) > **Environmental Data** (P.273)	—
GRI 308: Supplier Environmental Assessment 2016			
308-1	New suppliers that were screened using environmental criteria	—	—
308-2	Negative environmental impacts in the supply chain and actions taken	—	—
GRI 401: Employment 2016			
401-1	New employee hires and employee turnover	> **Promoting Diversity, Equity and Inclusion (DEI)** (P.190) > **Social Data** (P.286)	—
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	—	—
401-3	Parental leave	> **Social Data** (P.286)	—

Disclosure		Location	
		Sustainability report	Other
GRI 402: Labor/Management Relations 2016			
402-1	Minimum notice periods regarding operational changes	—	—
GRI 403: Occupational Health and Safety 2018			
403-1	Occupational health and safety management system	> **Occupational Health and Safety** (P.202)	—
403-2	Hazard identification, risk assessment, and incident investigation	> **Occupational Health and Safety** (P.202)	—
403-3	Occupational health services	> **Occupational Health and Safety** (P.202)	—
403-4	Worker participation, consultation, and communication on occupational health and safety	> **Occupational Health and Safety** (P.202)	—
403-5	Worker training on occupational health and safety	> **Occupational Health and Safety** (P.202)	—
403-6	Promotion of worker health	> **Occupational Health and Safety** (P.202)	—
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	> **Occupational Health and Safety** (P.202)	—
403-8	Workers covered by an occupational health and safety management system	—	—
403-9	Work-related injuries	> **Social Data** (P.286)	—
403-10	Work-related ill health	> **Occupational Health and Safety** (P.202)	—
GRI 404: Training and Education 2016			
404-1	Average hours of training per year per employee	> **Social Data** (P.286)	—
404-2	Programs for upgrading employee skills and transition assistance programs	> **Promoting Talent Acquisition and Development** (P.188)	—
404-3	Percentage of employees receiving regular performance and career development reviews	—	—
GRI 405: Diversity and Equal Opportunity 2016			
405-1	Diversity of governance bodies and employees	> **Promoting Diversity, Equity and Inclusion (DEI)** (P.190)	—
405-2	Ratio of basic salary and remuneration of women to men	—	—
GRI 406: Non-discrimination 2016			
406-1	Incidents of discrimination and corrective actions taken	—	—
GRI 407: Freedom of Association and Collective Bargaining 2016			
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	—	—

Disclosure		Location	
		Sustainability report	Other
GRI 408: Child Labor 2016			
408-1	Operations and suppliers at significant risk for incidents of child labor	—	—
GRI 409: Forced or Compulsory Labor 2016			
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	—	—
GRI 410: Security Practices 2016			
410-1	Security personnel trained in human rights policies or procedures	—	—
GRI 411: Rights of Indigenous Peoples 2016			
411-1	Incidents of violations involving rights of indigenous peoples	—	—
GRI 413: Local Communities 2016			
413-1	Operations with local community engagement, impact assessments, and development programs	> **Community** (P.235)	—
413-2	Operations with significant actual and potential negative impacts on local communities	Not applicable	—
GRI 414: Supplier Social Assessment 2016			
414-1	New suppliers that were screened using social criteria	—	—
414-2	Negative social impacts in the supply chain and actions taken	> **JFE Group Value Chain** (P.28)	—
GRI 415: Public Policy 2016			
415-1	Political contributions	—	—
GRI 416: Customer Health and Safety 2016			
416-1	Assessment of the health and safety impacts of product and service categories	> **Providing Quality Products and Enhancing Customer Satisfaction** (P.226)	—
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	—	—
GRI 417: Marketing and Labeling 2016			
417-1	Requirements for product and service information and labeling	—	—
417-2	Incidents of non-compliance concerning product and service information and labeling	Not applicable	—
417-3	Incidents of non-compliance concerning marketing communications	—	—
GRI 418: Customer Privacy 2016			
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	—	—

Comparison with Environmental Reporting Guidelines 2018 (Ministry of the Environment, Japan)

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(3) Reporting standards and guidelines	> **Editorial Policy** (P.308) > **Guidelines Content Index** (P.310)
(4) Overview of the environmental report	> **Editorial Policy** (P.308)
2. Trends in key performance indicators	
(1) Trends in major performance indicators	> **Material Issues of Corporate Management** (P.13)

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(3) Roles of the board of directors and board of executive officers in the management of material environmental issues	> **Environmental Management** (P.45) > **Identification and Assessment of Risks and Opportunities (TCFD Scenario Analysis)** (P.113)
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8. Strategy	
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(3) Scope 3 emissions	› Initiatives to Address Climate Change (P.49) › Environmental Data (P.273)
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3. Biodiversity	
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TCFD Content Index

Recommended Disclosures	Overview of TCFD Recommendations	Location
Governance Disclose the organization's governance around climate-related risks and opportunities.	a. Describe the board's oversight of climate-related risks and opportunities	› **Corporate Governance** (P.248) › **Risk Management** (P.269) › **Environmental Management(Governance)** (P.47)
	b. Describe management's role in assessing and managing climate-related risks and opportunities	
Strategy Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy and financial planning where such information is material.	a. Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term	› **Progress under JFE Vision 2035 and the Eighth Medium-term Business Plan** (P.24) › **JFE Group Value Chain** (P.28) › **Initiatives to Address Climate Change(JFE Group Environmental Vision for 2050)** (P.49) › **Initiatives to Address Climate Change(JFE Group's Strategy for Addressing Climate Change Issues)** (P.51) › **Identification and Assessment of Risks and Opportunities (TCFD Scenario Analysis)** (P.113)
	b. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	
	c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	
Risk Management Disclose how the organization identifies, assesses, and manages climate-related risks.	a. Describe the organization's processes for identifying and assessing climate-related risks	› **Risk Management** (P.269) › **Environmental Management** (P.45) › **Environmental Management(Risk Management)** (P.48)
	b. Describe the organization's processes for managing climate-related risks	
	c. Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management	
Metrics and Targets Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	› **Progress under JFE Vision 2035 and the Eighth Medium-term Business Plan** (P.24) › **Material Issues of Corporate Management** (P.13) › **Initiatives to Address Climate Change(Metrics and Targets)** (P.54, 70)
	b. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	› **Initiatives to Address Climate Change(Metrics and Targets)** (P.54, 70) › **Environmental Data** (P.273)
	c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	› **Material Issues of Corporate Management** (P.13) › **Initiatives to Address Climate Change(JFE Group Environmental Vision for 2050)** (P.49) › **Initiatives to Address Climate Change(Metrics and Targets)** (P.54, 70)