



# JFE GROUP REPORT 2024

Integrated Report

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## Publication of JFE GROUP REPORT 2024

Since fiscal 2018, JFE Holdings, Inc. has published an integrated report that combines non-financial information, such as environmental, social, and governance (ESG) initiatives, with financial information including business strategies, with the objective of furthering the understanding of the JFE Group's value creation narratives over the medium to long term among all stakeholders, including shareholders and investors. Fiscal 2024 is the final year of the Seventh Medium-term Business Plan, an important year that is a starting line for our long-term vision for growth. Our mission is to be essential to society's sustainable development and to create safe, comfortable lives for people everywhere. Ensuring environmental and social sustainability (helping to resolve social issues) and establishing economic sustainability (stable earnings power) will be crucial to making this happen. We aim to be a robust corporate group able to provide value over the long term.

We hope this report furthers everyone's understanding of our initiatives on these fronts. On editing this report, we referred to the IFRS Foundation's International Integrated Reporting Framework and the Ministry of Economy, Trade and Industry's Guidance for Collaborative Value Creation. Relevant departments worked earnestly together to prepare this report in accordance with the Company's guidelines. Here, we state that the production process and content of this report is fair and just.

We will continue to engage in dialogues with our stakeholders, and do our utmost to realize sustained environmental value and social value, while also enhancing our corporate value. After reading the JFE GROUP REPORT 2024 integrated report, please share with us your ideas and opinions about JFE Holdings. While building relationships of trust with all of our stakeholders from a long-term perspective, we would like to take a step forward together into a brighter future. We ask for your continued support.



Representative Director,  
President and CEO

**Yoshihisa Kitano**

### <Reporting Period>

FY2023 (April 1, 2023, to March 31, 2024)

Reports on some activities undertaken outside this period are included.

### <Organizations Covered>

The holding company JFE Holdings, Inc. and its three operating companies JFE Steel Corporation, JFE Engineering Corporation, and JFE Shoji Corporation. Additionally, some reports may include the equity-method affiliate Japan Marine United Corporation and Group companies under the operating companies (consolidated subsidiaries and equity-method affiliates).

### Guidelines

- IFRS Foundation: International Integrated Reporting Framework
- Ministry of Economy, Trade and Industry: Guidance for Collaborative Value Creation
- GRI: Sustainability Reporting Guidelines GRI Standards
- Financial Stability Board: The final report of the Task Force on Climate-related Financial Disclosures (TCFD)



### Publication Date

October 2024; (Next issue (planned): October 2025)

### Disclaimer

All current plans, strategies, and beliefs published in this report that are not historical facts contain forecasts about future performance, which are subject to risks and uncertainties. Actual results may greatly differ from those forecasts due to various factors including future trends in the global and Japanese economies, and in related industries. Accordingly, please note that we do not guarantee the reliability of such forward-looking information.

## Message from the CEO

Point of View

### 01: VISION

**Creating a solid management foundation for becoming carbon neutral**

Point of View

### 02: CHALLENGE

**Locking onto growth by investing management resources in GX, DX, and human capital**

**Yoshihisa Kitano**

Representative Director,  
President and CEO

# The JFE Group is building a solid foundation for the advent of a carbon-neutral era, and aims to fulfill its mission of being essential to society's sustainable development and creating safe, comfortable lives for people everywhere.

## DETERMINATION

### Thoughts on My Appointment as President

01

I was appointed President of JFE Holdings, Inc. in April 2024. As the President of JFE Steel Corporation, I was in charge of the steel business, and looking ahead, I intend to create new corporate value by steering toward growth in the steel, engineering, and trading businesses.

Under the four-year Seventh Medium-term Business Plan that commenced in fiscal 2021, the JFE Group has boldly taken the necessary steps to leap to a new stage and establish a robust business foundation for sustained growth. As a result, our business foundation has evolved into one able to steadily increase earnings even in challenging business environments.

It has become my responsibility to conceive a long-term vision for the JFE Group and come up with targets and a path for achieving growth. In order for each operating company to leverage their advantages, overcome tough business conditions with the Group's comprehensive capabilities, and win at global competition, we have renewed our commitment to providing a rewarding work environment for our employees who have endeavored tirelessly on the front lines to finish structural reforms, and to be an exciting company for our many stakeholders who have supported us for so long.

## MOTTO

### "Think, Speak, and Act on Your Own," and Set Ambitious Goals

02

There are two phrases that I believe are crucial for work. One is "Think, speak, and act on your own." Since joining Kawasaki Steel in 1982, I have been involved in developing production technology on the production site of steelworks for most of my career. This phrase, which a superior told me when I was a young engineer, has become my creed.

The other phrase is from Mr. Konosuke Matsushita, the founder of Matsushita Electric Industrial (now Panasonic): "If you want to get to the second floor, figure out a way to get there. This determination will inspire you to think of solutions as ladders and stairs. If you only think about whether or not you will get there, no ladder will come to mind." These wise words

emphasize the importance of setting ambitious goals (wanting to get to the second floor) and having a strong will to accomplish them (the determination to get to the second floor). I think of these words when facing challenges.

During my tenure as the general manager in charge of production, business conditions were brisk and our primary aim was to produce as much steel as possible, even one extra ton of steel. At one point, the head of the steelworks gave us a production target that was higher than anyone had heard of before. I thought deeply about why achieving this lofty target was necessary, gathered all the production site leaders, and shared my thoughts. Each of them then considered

## Message from the CEO

what needed to be done and took action, leading us to achieve a monthly production record within a few months that was regarded as a miracle. Furthermore, this process brought to light a number of issues on the production floor, which, when addressed, led to organizational growth, subsequent equipment upgrades, and the construction of new facilities, supporting JFE Steel's earnings as an anchor factory to this day.

In 2019, shortly after becoming President of JFE Steel, I faced significant challenges. During my first two years, JFE Steel posted losses while going through our biggest crisis since JFE was established. During this period, we targeted a domestic crude steel production

capacity of 30 million tons and continued investing to expand capacity and maintain functionality. However, due to the rise of Chinese steel manufacturers, competition intensified in overseas markets for commodity steel, and we were unable to increase profits. I thought long and hard about how we could create a company that consistently generates earnings and continues growing, even in a challenging external business environment. I decided that JFE Steel must shift focus from quantity to quality during the Seventh Medium-term Business Plan (fiscal 2021–2024) and set us on a course of action with fierce determination to achieve even more ambitious targets.

## RESULTS

### Completion of Structural Reforms in the Steel Business

03

Under the Seventh Medium-term Business Plan, to address intensifying competition in overseas markets and a potential decline in domestic demand, we carried out a review of our domestic production structure. This entailed the consolidation of production lines, including the discontinuation of can steel production facilities in the Chiba district and upstream processes in the Keihin district. While honoring the fundamental principle of keeping people employed, we had no other choice but to proceed with employee reassignments, a tough decision for the management team.

At the same time, we focused our efforts on selling high-value-added products within our limited production capacity, and this resulted in increases in both the sales ratio of high-value-added products and earnings per ton. As part of this initiative, we accelerated the development of new products, such as ultra-high strength automotive steels, electrical steel sheets, high-strength steel sheets, highly corrosion-resistant steel sheets and large and heavy plate steel.

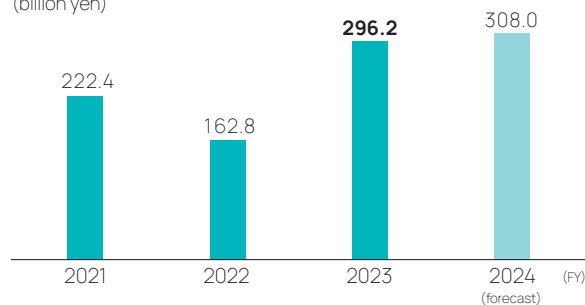
Moreover, to ensure stable supply—a basic principle of manufacturing—and to improve our production capabilities, we implemented a cyber-physical system (CPS)\* that incorporates new data science technologies, and it has been steadily delivering results.

Despite the challenging business environment, these initiatives have resulted in the securing of stable earnings. In fiscal 2024, earnings were negatively affected by a temporary decline in demand in the first half, and we no longer expect to reach the ¥230

billion target for segment profit (Excluding inventory valuation differences) in the steel business as outlined in the medium-term business plan. However, we expect to achieve our target for a profit of ¥10,000 per ton of steel. The engineering business and the trading business are able to reliably generate segment profit totaling around ¥70 billion, supporting Group earnings. For fiscal 2024, management targets consolidated business profit (Excluding inventory valuation differences in the steel business) of ¥308 billion.

\* CPS is a system that creates value by aggregating voluminous sensor data (big data) from physical spaces (actual equipment and products) into a cyber environment, analyzing it using various methodologies, and feeding the results back to the physical space in real time.

**Group consolidated business profit  
(Excluding inventory valuation differences in the steel business)**  
(billion yen)



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## VISION

### Vision of the JFE Group

04

Having established a management foundation resilient to external influences, we believe that we are now ready to leap to a new stage. Our vision for the JFE Group is to build a solid foundation to navigate the coming era of carbon neutrality, and achieve sustained growth in this era and beyond.

Our first objective is to double the business profit of the Group and establish a financial foundation that facilitates investments in future growth. In the steel business, we estimate that the capital investment required to transition to carbon-neutral production processes will be as much as ¥1 trillion through 2030. Our current levels of earnings are far from sufficient to fund the massive investments needed to achieve carbon-neutral production. By aiming to double business profit, we aspire to achieve world-class profitability that surpasses our rivals in steel manufacturing. Moving forward, we will identify growth fields and regions for each

operating company, allocate management resources accordingly, and work diligently to enhance corporate value through aggressive investments.

Second, to achieve carbon neutrality, we aim to complete the development of ultra-innovative technologies, such as carbon recycling blast furnaces and hydrogen direct-reduction steelmaking, by the mid-2030s. While these technological challenges are highly ambitious, I expect our employees to approach them with the enthusiasm and determination needed to make this dream a reality. We must succeed in this domain. Success will open up opportunities and give us first-mover advantages. Becoming a top runner in technology development for carbon neutrality is a meaningful objective that we must achieve for future growth and the health of the global environment.

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## OUTLOOK

### Outlook by Business Segment

05

In the steel business, we will further advance the shift from quantity to quality, increasing the ratio of high-value-added products. While we have traditionally focused business development on markets in China and the ASEAN region, we will now concentrate on regions where steel demand is likely to strengthen in the future and the JFE Group's high-value-added products can be leveraged. Specifically, we plan to reinforce our business presence in India, Indonesia, North America, and Australia. Additionally, we have our eyes on the Middle East region, where renewable energy, such as solar power, and carbon capture, utilization, and storage (CCUS) should grow as alternatives to petroleum. (● Steel Business on page 53)

In the engineering business, we will focus on projects related to the circular economy. As we move toward the era of carbon neutrality, the circular economy will be a critical factor in the growth of the JFE Group. A circular economy encompasses the three key elements of recycling, reuse, and reduce. In the engineering business, businesses related to recycling and reuse include waste-to-energy power generation projects that

effectively utilize trash and other waste as a resource, the business of supplying electricity generated from renewable energy, and the business of recycling collected PET bottles. We expect demand to continue growing in these businesses, and aim to increase earnings by expanding overseas. (● Engineering Business on page 56)

In the steel business, we will help society reduce waste by supplying high-performance steel products, such as including fatigue-resistant steel that contributes to the longevity of infrastructure and ultra-high-strength steel that lightens automobiles. As a group working together, we will endeavor to make a circular economy.

In the trading business, we will leverage our far-reaching network to obtain and utilize diverse information throughout our varied business activities, aiming to expand the supply chain and increase business profit. We are also working to expand transactions outside the Group, and intend to develop new markets by acquiring local construction material processing companies in the United States and Australia.

## Message from the CEO

Moving forward, we will accelerate commercialization in key investment regions and aim to increase business profit by continuing to explore various business opportunities, including M&A. (● Trading Business on page 59)

In the shipbuilding business, Japan Marine United Corporation (an equity-method affiliate) excels in high-value-added products, such as Jack-Up Vessels\* for offshore wind power generation, various naval vessels, and icebreakers vessels. The shipbuilding business has benefited from external factors such as the weak yen and a recovery in ship demand, resulting in a return to profitability in fiscal 2023, with plans to remain profitable in fiscal 2024. We will examine ways to create a business foundation that is resilient to external factors while leveraging the Company's strengths. Furthermore, we will advance the development of floating offshore wind power plants as a contributor to national energy policy. (● Shipbuilding Business on page 61)

In addition to strengthening earnings capabilities in the steel, engineering, and trading businesses, we view the utilization of land in the Keihin district as a

fourth source of earnings after the completion of structural reforms. We have commenced demolition work in the Minami-watarida and Ohgimachi areas, marking the start of a large-scale land conversion project covering approximately 400 hectares. The Minami-watarida area will be developed into a research and development hub in collaboration with business partners. The Ohgishima area will become a hydrogen supply base as part of a national pilot project to construct a large-scale hydrogen supply chain. Additionally, we will evaluate business use cases, such as renewable energy power generation and storage, CCUS, and data centers in collaboration with local companies.

To ensure our growth into the future, we will invest in green transformation (GX), digital transformation (DX), and human resources to steadily implement these business strategies.

\* Jack-Up Vessels are work vessels used in the construction of wind turbines for wind power plants anchored to the seabed.

### GX STRATEGY

## Taking on the Challenge of Green Transformation (GX)

06

Reducing CO<sub>2</sub> emissions to prevent global warming is a challenge faced by the entire world. I believe that tackling this issue aligns perfectly with the JFE Group's quest to remain essential to society.

In the steel business, while we advance the development of ultra-innovative technologies to achieve carbon neutrality by 2050, it is also crucial to increase the supply of green steel during the transition period until these developments are completed. Particularly, greening high-value-added products is a key strategy for enhancing the international competitiveness of Japanese industry. For instance, if we can establish a mass production system for carbon-neutral automotive steel sheets, our steel business would become more globally competitive. We can make significant progress by introducing electric arc furnaces in the Kurashiki district and creating a supply structure for high-value-added green steel.

However, we must acknowledge that the true environmental value of green steel is not yet fully understood in Japan. Looking ahead, it will be vital for the public and private sectors to work together to raise awareness of the value of going green, and to share

the associated costs across society as a whole in order to build a carbon-neutral society. This approach will enable Japanese products to lead the world in both quality and environmental friendliness, contributing to the development of Japan's economy.

In the engineering business, we are engaging in offshore wind power generation projects, waste-to-energy power generation projects, and CCUS projects in support of Japan's energy policy. In the offshore wind power generation business, we operate the Kasaoka Monopile Factory as Japan's largest monopile supplier, operate and maintain (O&M) offshore wind power farms, and advance research and development in floating offshore wind power plants. In the waste-to-energy power generation business, we currently operate 11 plants in Japan and two overseas. We will continue to focus on utilizing overseas engineering bases, diversifying and internationalizing parts procurement, and enhancing O&M with digital technologies, with the aim of developing a globally competitive business.



## Our Next Stage by Digital Transformation (DX)

07

We have no doubt that securing talent will become increasingly difficult, and that the manufacturing industry must improve labor productivity with DX. (● Promotion of DX Strategy on page 43)

We are driving DX by transforming existing operations through the deployment of new technologies, such as robotics, remote and automated systems, and AI/IoT, while also creating innovative new business models that leverage these development technologies.

In the steel business, we aim to be a pioneer by migrating all of our core systems from mainframes to the cloud by fiscal 2025. The extensive range of technologies and know-how that we have developed at each steelworks and business site is a valuable asset that we are proud to have. By building a platform in the cloud that contains all our skills, technologies, and data, we can take a leap forward on the utilization of

complex data and undertake various operational reforms. This platform will also open up new possibilities, such as offering our technologies and expertise in a solutions business to other manufacturers.

Additionally, we have begun providing useful software and robots in solutions for a broad range of companies, leveraging our expertise in equipment maintenance and workload reduction that we developed in steelmaking. In the engineering business, we are developing and testing systems aimed at energy-efficient operations and fully automated plant operations using AI. In collaboration with the trading business, the engineering business is also working on remote integrated management systems for the offshore wind power field. Moving forward, we will continue to promote new DX initiatives while leveraging the strengths of the JFE Group.

## Human Resources for the Group's Future

08

Human resources have become an increasingly important factor in advancing the strategies I have outlined so far. In this era of transformation, human resources will be a driving force behind corporate growth. I earnestly hope that the JFE Group will be steadfast as a company that values people and leverages individual strengths. To achieve this, we will focus on acquiring and training

talent, enhancing engagement, and expanding investments in the management of human capital.

As we push forward with our transformation, including entering new domains and doubling profits, diversity and inclusion, i.e., the interweaving of diverse values and ways of thinking, will play a vital role in fostering new ideas and solutions. We must adopt an approach to training that values each employee's individuality and interests, and manage employees in a way that builds effective operations. For example, in our steel and engineering businesses, we have introduced an internal job posting system. When a business unit needs people with specific talents, they can openly recruit within the Company, facilitating job matching and transfers. This open approach obliges business units to carefully consider the kind of talent they are lacking and need to achieve their high goals.

We ask our employees to follow the JFE Group's corporate vision of "contributing to society with the world's most innovative technology" and adhere to our corporate values, "Challenging Spirit. Flexibility. Sincerity." We aim to create an environment where employees can



## Message from the CEO

continue to take on challenges with courage, while aligning with the Group's aims for medium- to long-term sustainable growth and enhancement of corporate value. Just as I experienced the thrill of achieving lofty goals in the past, we intend to foster a corporate culture where each employee can pursue their dreams and take on challenges, preparing them to lead the JFE Group to the next stage. Another important mission of

mine is to promote the JFE name as a prime example of a company where employees work with motivation and new people find it easy to join. (● Human Resources on page 63)

### CONCLUSION

## To Our Stakeholders

Steel is an indispensable material for a society of abundance in the future. The movement toward carbon neutrality means that we must provide steel materials to society while protecting the global environment. We view this movement as an opportunity, not a crisis. I am confident that we can continue to grow while contributing to the future of our planet through our business activities.

The JFE Group's approach to management puts more emphasis on quality than quantity, and we are

accelerating the development of technologies that can contribute to the realization of a carbon-neutral society. We are determined to evolve as a company that is essential to society's sustainable development and to create safe, comfortable lives for people everywhere, as the reason for the JFE Group's existence. To our stakeholders, I hope that this report will further your understanding of our business and get you excited in what JFE Holdings, Inc. has to offer for the future.

09



Representative Director, President and CEO

**Yoshihisa Kitano**

# Sources of Value Creation

The JFE Group has contributed to the development of industries and society through its products and services centered around steel. In this section, we introduce the value creation framework of the JFE Group.

- 11 | The Value of Steel
- 13 | Corporate Vision / Corporate Values / Standards of Conduct / Our Vision
- 15 | Contributing to society with our technological capabilities
- 17 | Business Model (Steel Business and Trading Business)
- 19 | Business Model (Engineering Business)
- 21 | Process of Value Creation
- 23 | Toward a Sustainable Future

## The Value of Steel

# Steel supports safe and comfortable lives for an abundant world in the future

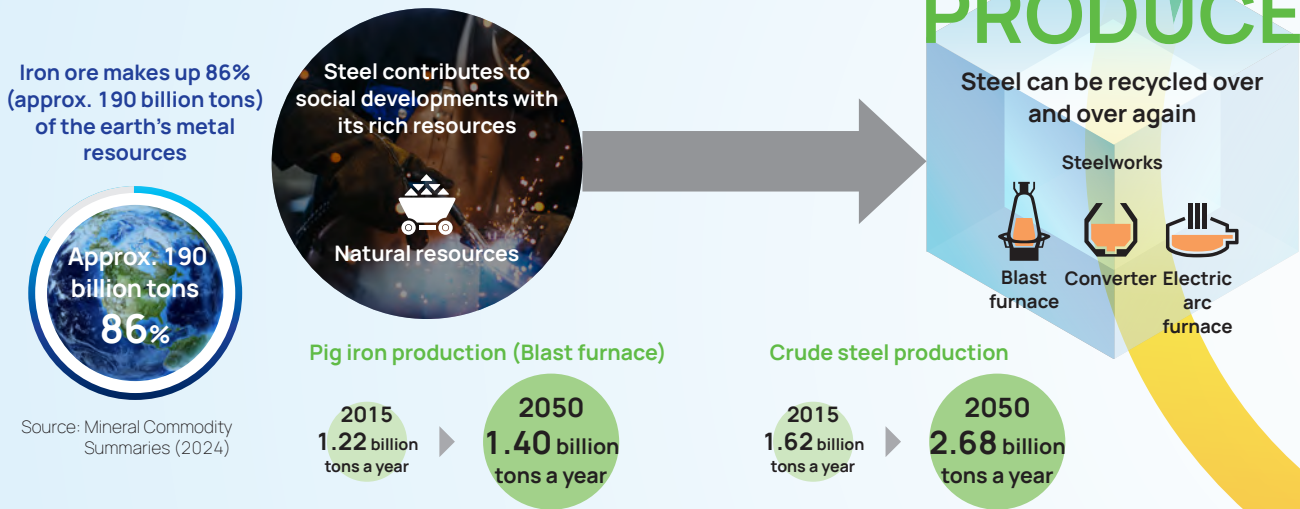
### Life Cycle Assessment of Steel

Steel establishes a highly sophisticated value chain of Produce–Use–Recycle thanks to its excellent recyclability, and is reborn as anything over and over again. Therefore, it is important to evaluate steel's environmental impact by encompassing the entire life cycle including recycling. JFE Steel participated in the initiative to quantify the life cycle environmental impact of steel products, which is led by the Japan Iron and Steel Federation, as one of the core members, and developed an ISO/JIS Standard\*1 for the calculation. The results provided through the use of this standard have shown that the more superior the recyclability of material is, the less environmental impact such as global warming becomes. In Japan, there are 15 blast furnace and electric arc furnace steelmakers, including JFE Steel, that compile and disclose\*2 average data for life cycle inventory for each steel product.

\*1 ISO 20915: Life Cycle Inventory Calculation Methodology for Steel Products (2018.11)

JIS Q 20915: Life Cycle Inventory Calculation Methodology for Steel Products (2019.6)

\*2 <https://www.jisf.or.jp/en/activity/lca/data>

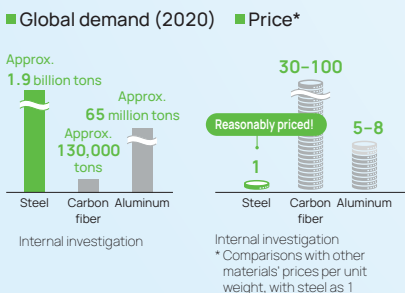


## High economic efficiency and low environmental impact

Steel can be reliably produced in large volumes to support our lives and society. Steel is also an environmentally friendly material, emitting far less CO<sub>2</sub> than other materials during production. Steel is an essential material for the safe and comfortable lives of people, and it is key to the sustainable development of society.

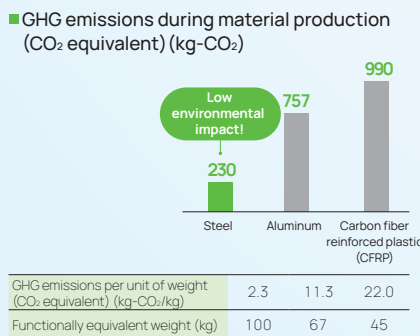
### Mass production at low cost

Steel is a material with rich reserves and a long history of development. It can be stably mass produced at a reasonable price, contributing to the sustainable development of society.



### Extremely low environmental impact at the manufacturing stage when compared to other materials

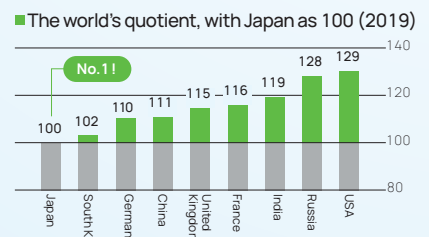
The functional equivalent of greenhouse gas (GHG) emissions of steel at the manufacturing stage is 1/4 to 1/5 of that of aluminum and carbon fiber.



Source: World Auto Steel data

### Japan's steel industry keeps the top energy efficiency in the world

The Japanese steel industry (converter furnace steel) produces steel with the lowest environmental impact when compared to other major countries in the world as a result of its longstanding efforts toward environmental conservation, including developing and spreading the use of energy-saving technologies.



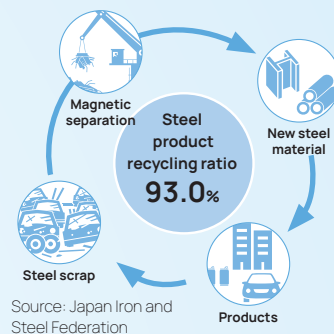
Source: Research Institute of Innovative Technology for the Earth (RITE)

## Excellent recyclability

Steel is a material with excellent recyclability, such as its property enabling magnetic separation and retrieval. Even after a final product made of steel ends its life in society, it is reborn over and over again into a high-quality, highly-functional product through highly efficient separation and retrieval technologies, thereby reducing environmental load throughout its life cycle.

### Closed-loop recycling of steel

Steel can be recycled many times as the raw material of products made in the same steel material while maintaining the original properties of the iron material itself. Closed-loop recycling is superior to open-loop recycling\* that recycles other materials in terms of sustainability. This is due to the fact that it is designed to reduce the amount of natural resources being newly introduced, moreover reduce the discharge of environmentally hazardous substances, and reduce waste.



\* A limited form of material recycling that involves application of the heat generated from the incineration of materials as well as recycling where the material may deteriorate or change in quality.

# RECYCLE

Efficient separation and retrieval of steel using its magnetic property

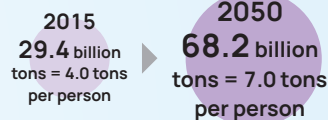
Dismantle and collect

Steel can be reborn as anything over and over again

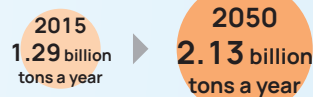
Steel is used by society in a variety of final products



### Steel stock



### Demand for steel



# USE

Contributing to sustainable development of our lives and economy by the world's best energy-saving and environmental technologies

Processing and different manufacturing Automobiles, construction materials, etc.

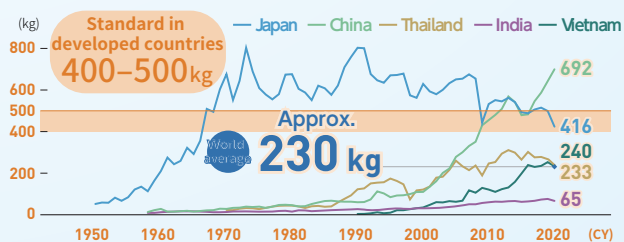
## Foundation for life and society

In our lives, steel helps reduce our burden on the environment. For example, by using high-tensile steel (thinned-down steel sheets that keep their strength) in automobiles, automobile weight can be substantially reduced without sacrificing passenger safety during vehicle collisions, thereby contributing to lower CO<sub>2</sub> emissions in society as a whole.

### The potential to grow on a global level

The world average of the annual consumption of steel currently stands at approximately 230 kg per capita. Going forward, the long-term global demand for steel is expected to keep growing alongside the economic development of emerging countries.

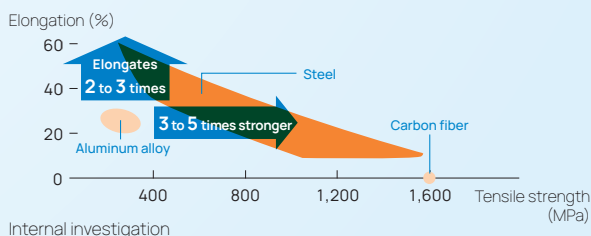
■ Trends in annual steel consumption per capita by country (kg per capita/year)



### Potential for evolution

Steel can be elongated two to three times more than aluminum at the same strength, and is three to five times stronger at the same extended rate, making it the optimal material for the world-class structures of the times, such as Tokyo Skytree. Steel still has considerable potential for evolution. The emerging needs of society will make steel evolve, and contribute to a productive future.

■ Comparison of strength and elongation between steel, aluminum, and carbon fiber



CORPORATE VISION

Contributing to society  
with the world's most  
innovative technology

CORPORATE VALUES

Challenging Spirit.  
Flexibility. Sincerity.

STANDARDS OF CONDUCT

All JFE Group personnel are required to faithfully adhere to the following Standards of Conduct in all corporate activities. These standards embody the JFE Group's Corporate Vision and go hand-in-hand with its Corporate Values.

Senior managers are responsible for communicating these standards to employees of Group companies and their supply chain partners, and creating effective systems and mechanisms to ensure adherence to ethical standards.

Senior managers are also responsible for measures to prevent the recurrence of any violation of these standards. Additionally, they must report violations promptly and accurately to internal and external stakeholders, determine the persons of relevant authority and accountability, and resolve matters rigorously.

1. Provide quality products and services
2. Be open to society
3. Work with communities
4. Globalize
5. Exist harmoniously with the global environment
6. Maintain proper relations with governments and political authorities
7. Maintain crisis readiness
8. Respect human rights
9. Provide challenging work environments
10. Comply with laws and ordinances

## Our Vision

### To remain an essential presence in any era

The JFE Group continues to take on challenges to be essential to society's sustainable development and to create safe, comfortable lives for people everywhere through products and services focused on iron.



#### Steel business: **JFE Steel**

JFE Steel is an integrated steelmaker, from iron ore to steel product, with world-class productivity and technological development capabilities. JFE Steel supplies high-performance steel products to the world.



#### Engineering business: **JFE Engineering**

JFE Engineering is a comprehensive engineering company that designs, builds, and operates plants and structures, supporting both industry and everyone's daily lives, particularly in the energy, environment, and social infrastructure fields.



#### Trading business: **JFE Shoji**

As the core trading company of the JFE Group, JFE Shoji handles a broad range of products, primarily steel but also materials such as steel raw materials, food, and electronics. It has a global business presence with supply chains encompassing Japan and the entire world.



#### Shipbuilding business: **Japan Marine United**

A leading shipbuilding company with top-class domestic construction capabilities and technological expertise. The company constructs large general merchant ships, various naval vessels, and icebreakers.

Through multiple businesses centered on steel production, we deliver the diverse value inherent in steel to the world, while aiming for a sustainable society.

Contributing to society with our technological capabilities

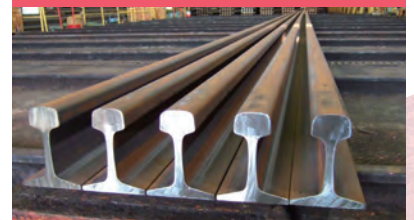
# Providing unique, highly functional products and services to society through world-class technological capabilities

**HBL™ Series of high-strength thick steel plate with low yield ratio for building structures**



Featuring high strength and high deformation performance, the HBL™ Series of thick steel plate is instrumental in making building structures taller and more resilient to earthquakes while saving welding-related labor. Contributes to resource conservation and CO<sub>2</sub> reduction by reducing the heaviness of steel plate through the application of high-strength steel

**SP 3 pearlitic steel rail with excellent wear resistance for heavy cargo railways with improved abrasion resistance**



Increases the lifespan of train rails, helps reduce rail maintenance costs of railway operators

**Marine Blocks™ for seaweed beds and coral reefs**



Contributes to revitalization of coral reefs by using byproduct from the steelmaking process

**J-TerraPlate™ large and heavy steel plates for offshore wind power generation**



Base structures, such as monopiles for wind turbines J-TerraPlate™ improves work efficiency in manufacturing and contributes to reductions in production costs

**ARRESTEX™ Crack Arrest Steel Plate for Large Containerships**



This steel plate offers exceptional performance by minimizing damage to ship hulls by preventing brittle cracks in weld zones from spreading.

2002

Start of the JFE Group



Nippon Kokan (1912-)

+

Kawasaki Steel (1950-)

- Robust sales base
- Advanced technological capabilities
- High-efficiency steelworks and manufacturing plants



**AI-driven rebar arrangement inspection**



Development of a world-first system that automates inspections of reinforcing rebar layout using AI-driven image recognition and photographs taken from flying drones, in order to inspect rebar at bridge construction sites. Helps shorten inspection time and increases labor efficiency

**JFESCRUM™ solutions for the construction field**



JFESCRUM™ is a one-stop solution for resolving various challenges in construction, from research and development to manufacturing and technical support.

Updates to social infrastructure

**J-STAR™ Weld high-efficiency ultra-narrow groove welding system**



Helps reduce energy usage and CO<sub>2</sub> emissions, in addition to shortening construction times and lowering installation costs with major improvements in welding efficiency

**JFE-METS™ (Integrated multi-site energy network services)**



Optimizes energy services with integrated management of multiple sites (not optimized energy of a single site) at business owner and area levels



JGreeX™ is a steel product with significantly lower CO<sub>2</sub> emissions than conventional products, which helps reduce CO<sub>2</sub> emissions related to the use of steel products by customers, calculated using the mass balance method.

Contributions to carbon neutrality

**Bottle to bottle**



The West Japan PET Bottle MR Center has an integrated production system for bottle-to-bottle raw material, a first in the Chubu and West Japan region, that leveraged the operational experience of Kyoei Industry Co., Ltd. and J&T Recycling Corporation.

**Gradient Si Super Core™ contributes to energy savings of electrical equipment**



Contributes to greater efficiency and downsizing of electrical equipment with high-performance materials that excel in energy conversion efficiency

**JFE Resolus™ production solution business**



The JFE Group is keen to offer customers the technologies it has developed and knowledge it has accumulated under the JFE Resolus™ solution brand.

**JESOLVA™ technology for using automotive steel sheets**

Contributes to lighter and improved performance of vehicles by expanding applications for ultra-high-strength steel sheet with our unique application technologies

**JEFORMA™ Series of highly formable ultra-high-strength steel sheet**

Contributes to reliable production of high-strength, lightweight parts and expands applications for high-strength steel sheet by providing high-performance, optimal steel sheet that meets required characteristics in parts



**Denjiro™ insulation-coated pure-iron powder for soft magnetic composites**

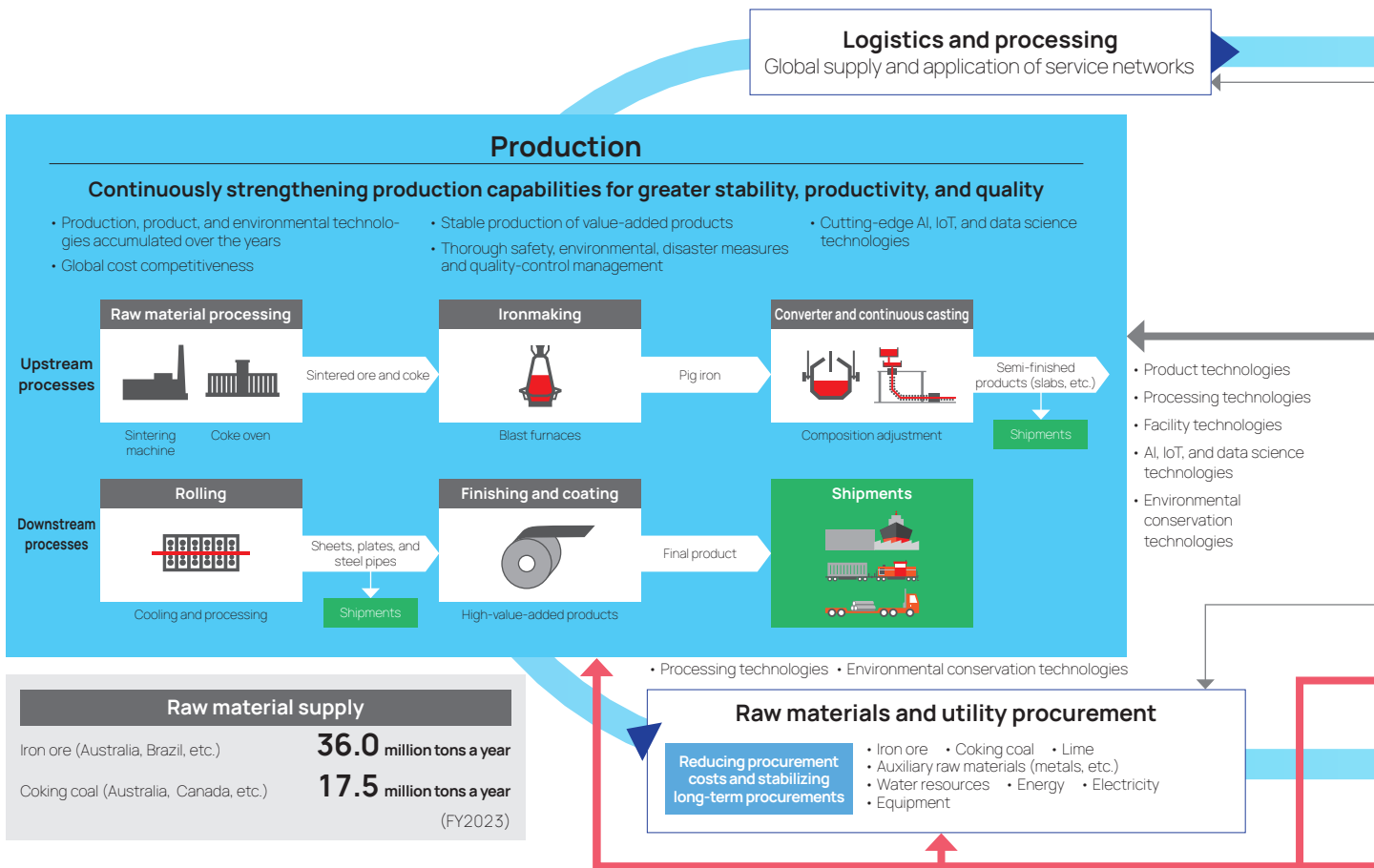
Contributes to thinner monitors

Development of industry

## Business Model (Steel Business and Trading Business)

# A business model that creates a JFE brand associated with high added value

The competitive advantages of JFE's steel and trading businesses are on three fundamental capabilities: (1) leading-edge technological development capabilities focused on customer needs, (2) production capabilities constantly being developed and enhanced at production sites, and (3) sales capabilities underpinned by solid relationships of trust with customers established over years by JFE Steel and JFE Shoji. We create new value tailored to customer needs and provide optimized solutions based on these three strengths. These competitive advantages, treasured assets accumulated through many decades of effort and not easily matched by other companies, are the driving force behind our sustainable growth.

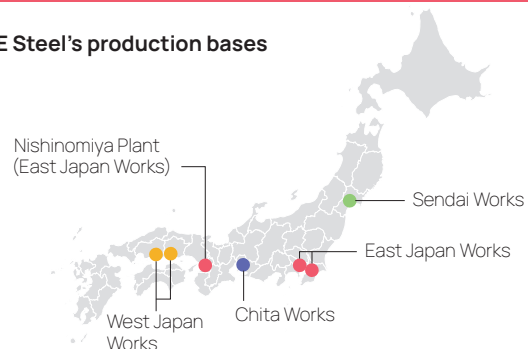


### Steel business overview

JFE provides highly functional steel products to customers worldwide as a blast furnace steelmaker with operations of the integrated steelworks, where it can produce final products from iron ore as raw materials. As a global strategy, we are expanding solutions-oriented businesses and deepening our "insider business" model,\* starting with the overseas steelmakers in our alliance.

\* In overseas markets accelerating, we invest in leading partners with local credibility, and locally process and sell steel manufactured by these partners.

### JFE Steel's production bases



## Leveraging competitive advantages through our business model

Measures Steel Business P53 TradingBusiness P59

### Technology

**Technological development to realize value creation**

JFE continuously elevates its technological capabilities to world-class levels to meet Japanese demands for top-quality steel, which in turn enables the company to compete globally and create new value through advanced technological development.

### Production

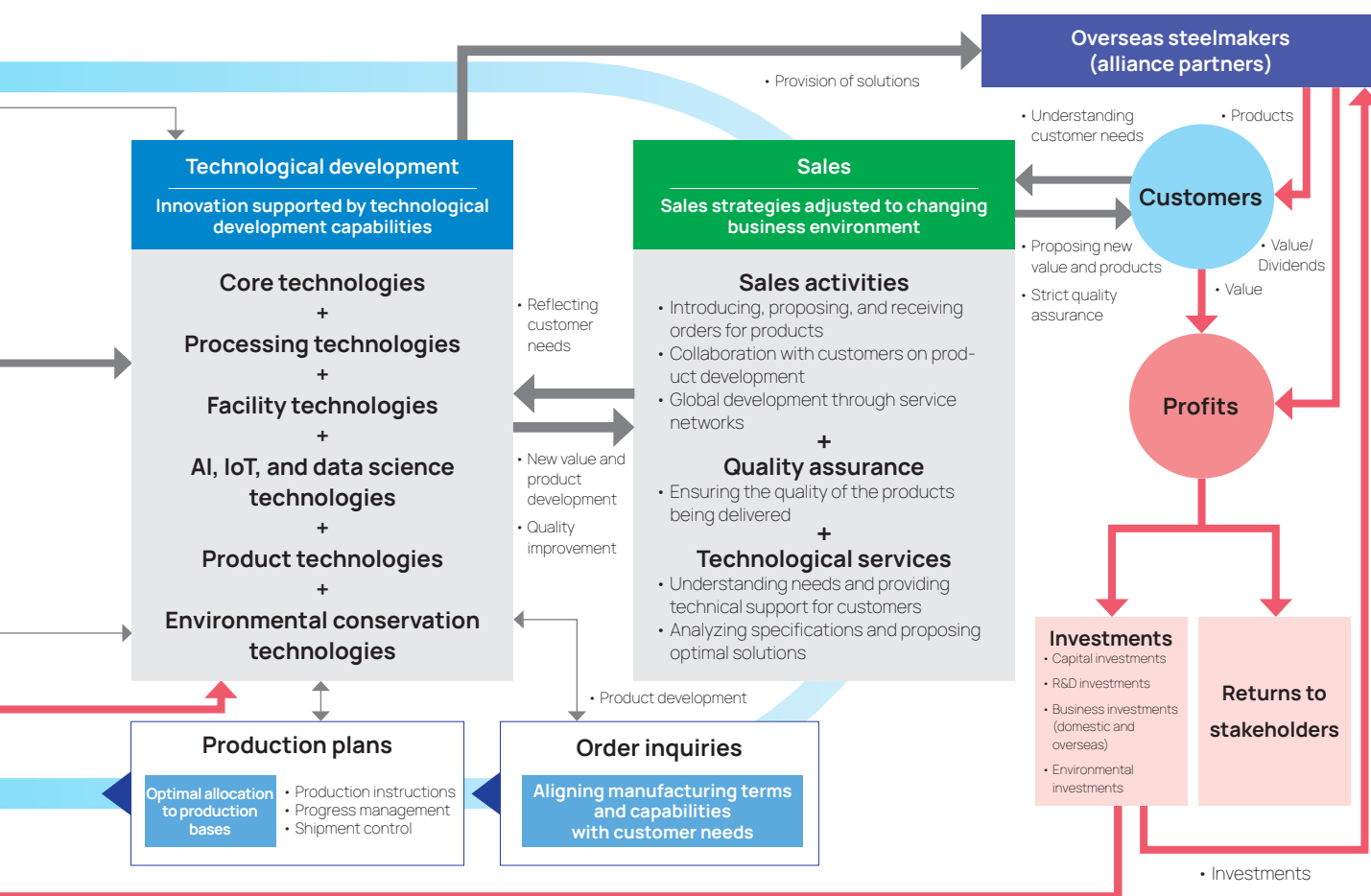
**Two major integrated steelworks with highly competitive strengths**

JFE has two major integrated steelworks, one each in western and eastern Japan, that boast world-class costs, products, and technologies. Both facilities leverage the highly competitive technologies, intellectual property, and know-how accumulated by JFE over many decades.

### Sales

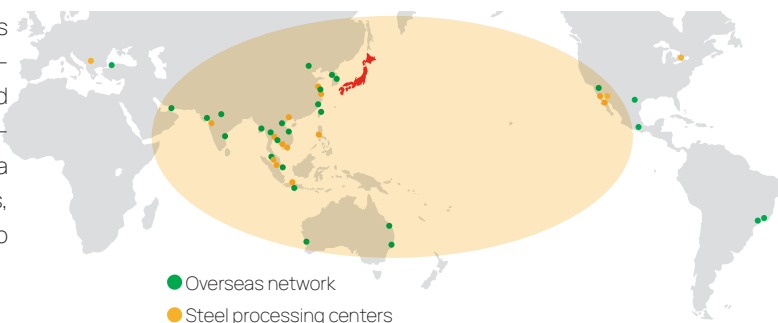
**Responding to needs in our stable customer base**

JFE has built a solid and highly stable global customer base—one that cannot be easily matched by rivals—thanks to its practice of collaborating from the early development stage to accurately address the exacting needs of its many customers.



### Trading business overview

The JFE Shoji Group is engaged in businesses ranging from steel materials, machinery, non-ferrous metals, chemicals, biomass fuels, and ships to food and electronics, with an overarching focus on steel products. Through a global network encompassing 97 companies, JFE Shoji provides services that add value to supply chain operations.

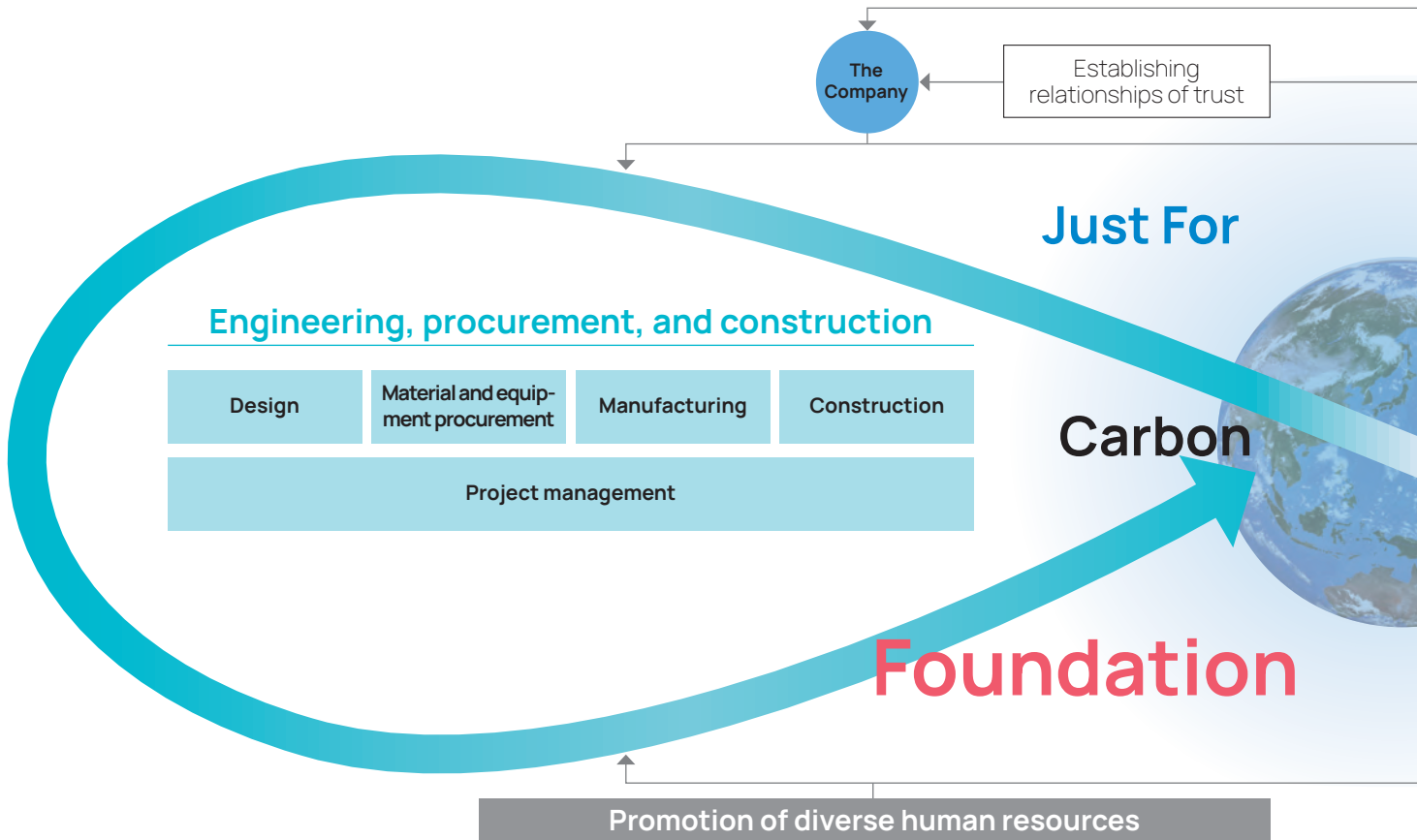


## Business Model (Engineering Business)

# Business model that strongly supports the lives of people

The sources of our competitive edge in the engineering business are (1) our engineering capabilities (engineering, procurement, and construction (EPC)) centered on building infrastructure that supports industry and human life, and (2) know-how to operating, maintenance & managing accumulated over the years, especially in waste-to-energy power generation and waterworks plants, which (3) paired with our diverse human resources and DX projects, leads to more abundant life in the future. Leveraging these three advantages, we aim to help the world become carbon neutral while promoting a circular economy. We aim to be an engineering company that is constantly leading the world and adapting to the change of the times.

As long as people in the world long for more comfortable and abundant life, there will never be an end to our mission. We will provide optimal solutions for society and strive to realize a sustainable society.



### Business overview

By focusing on these business fields, which are needed around the world all the time,

#### Environment



- Waste-to-energy plants
- Industrial waste processing

#### Recycling



- Food waste recycling
- Plastic recycling
- Incineration/power generation

#### Water



- Water and sewerage treatment plants
- Water and sewerage pipelines

Note: JFE Engineering Corporation's aqua engineering business in Japan (excluding overseas business and steel pipe business for water pipeline) was transferred to TSUKISHIMA JFE AQUA SOLUTION CO., LTD. on October 1, 2023 through the corporate divestiture.

The source of competitive advantages that reinforce our business model

Measures P.50

Engineering, procurement, and construction

Project execution capabilities with abundant experience and global structure

In a variety of fields, such as energy, the environment, and bridges, JFE has constructed numerous highly functional and high-quality structures that satisfy customer needs, covering everything from engineering to project handover. Moreover, we will strengthen our competitiveness by building out a global engineering system at overseas bases.

Operating business

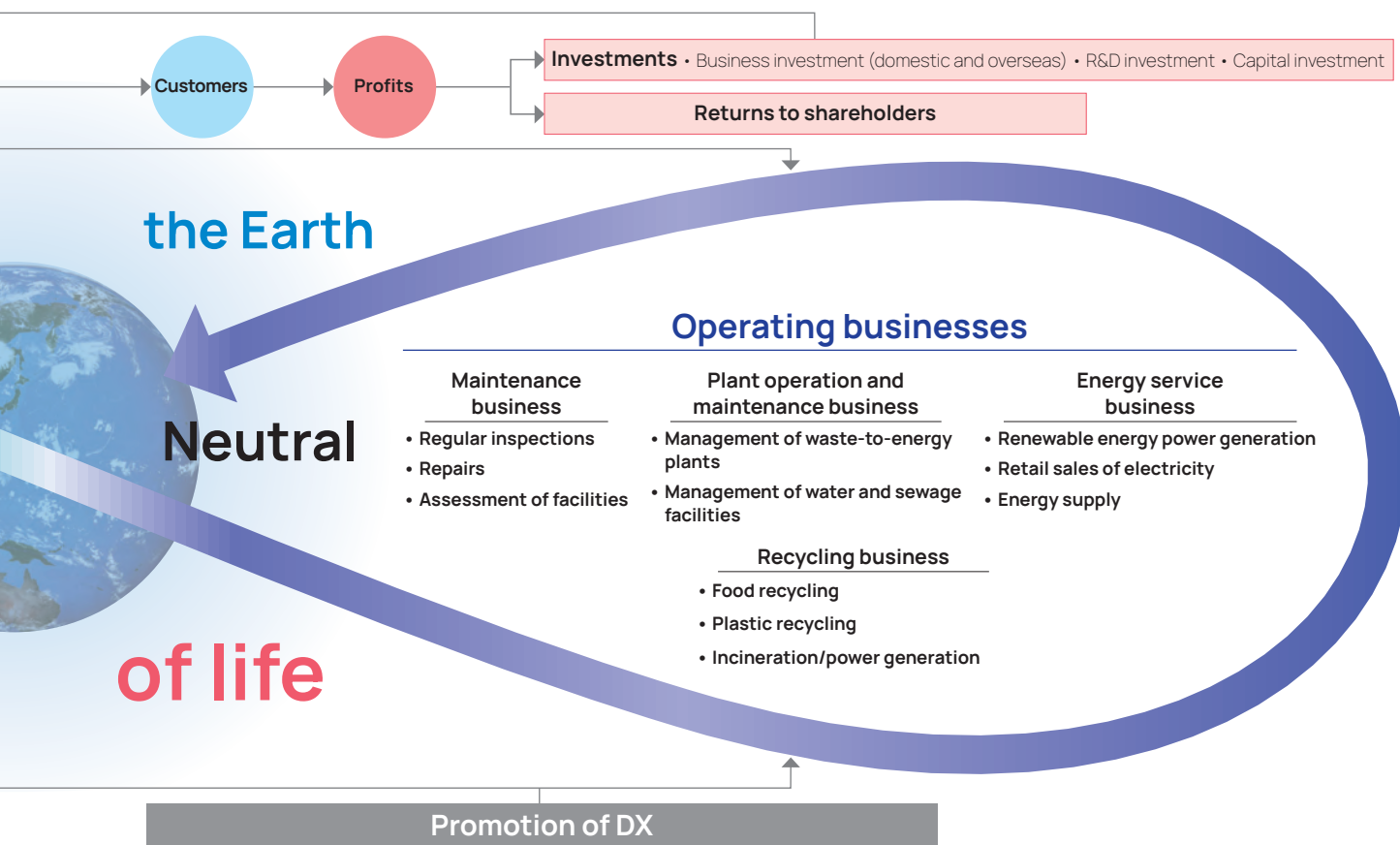
Business management capabilities with strengths in manufacturing expertise

We have accumulated operational know-how in plants in particular, such as waste-to-energy power generation and waterworks, and in the public services field, the company has an extensive track record in public-private projects. We also engage in our own recycling operations and renewable energy power generation business, and are expanding our presence in operation and maintenance (O&M) business domains around the world.

Diverse human resources and DX

Diverse human resources to support the business and promotion of DX to support the evolution of the company

Approximately 40% of our employees have diverse backgrounds, such as women, foreign nationals, and mid-career hires. We also strive to create work environments that draw out the best abilities of each and every employee. We support the advancement of "creation" and "responsibility" while digitalizing operations with AI and IoT.



we propose integrated services from business planning to EPC and operating businesses.

**Energy**

- LNG terminals
- Oil and gas pipelines
- Chemical plants

**Power generation and retail**

- Electricity retailing
- Renewable energy power generation
- Energy service provider

**Steel structures and industrial machinery**

- Transportation and logistics infrastructure (Bridges, ports, and harbor facilities)
- Disaster prevention infrastructure (Seawalls and breakwaters)
- Industrial machinery (Cranes and steam turbines)

# Process of Value Creation

### External conditions with significant impact

- Climate change
- Resource and energy problems
- Falling birthrate and aging population
- Market globalization, development of emerging countries
- Aging of infrastructure and equipment
- Advances in AI and IoT

Carbon neutrality

Shift focus from quantity to quality

Advance growth strategies

Greatly improve competitiveness with DX strategy



### Intellectual capital

R&D expenses (FY2023): ¥43.8 billion  
 Number of registered patents: Approx. 28,000 patents (about 14,000 in Japan, 14,000 overseas)



### Manufacturing capital

Number of blast furnaces (as of April 2024):  
 West Japan Works: 6, East Japan Works: 1  
 Number of bases (as of April 2024):  
 117 locations in 23 countries and regions (Group total)  
 Capital expenditures (FY2023): ¥346.1 billion



### Natural capital

Steel raw materials (FY2023): 56.1 million tons (iron ore, coal, and limestone)  
 Recycled raw materials (FY2023): 0.8 million tons (steel scrap)



### Social and other related capital

Number of customers (delivery destinations) (FY2023): Approx. 24,000 customers  
 \* Total of JFE Steel, JFE Engineering, and JFE Shoji (FY2023)



### Human capital

Number of employees (as of the end of March 2024): 62,218 persons (Group consolidated)  
 Annual training hours (FY2023):  
 Approx. 0.77 million hours a year (total of operating companies: approx. 39 hours a year per employee)  
 Safety investments: ¥10 billion annually



### Financial capital

Total equity (IFRS) (as of the end of March 2024): ¥2,538.5 billion

Steel Business

Comprehensive in each business by world-class

Trading Business

Creation of Group synergies

### Important management issues

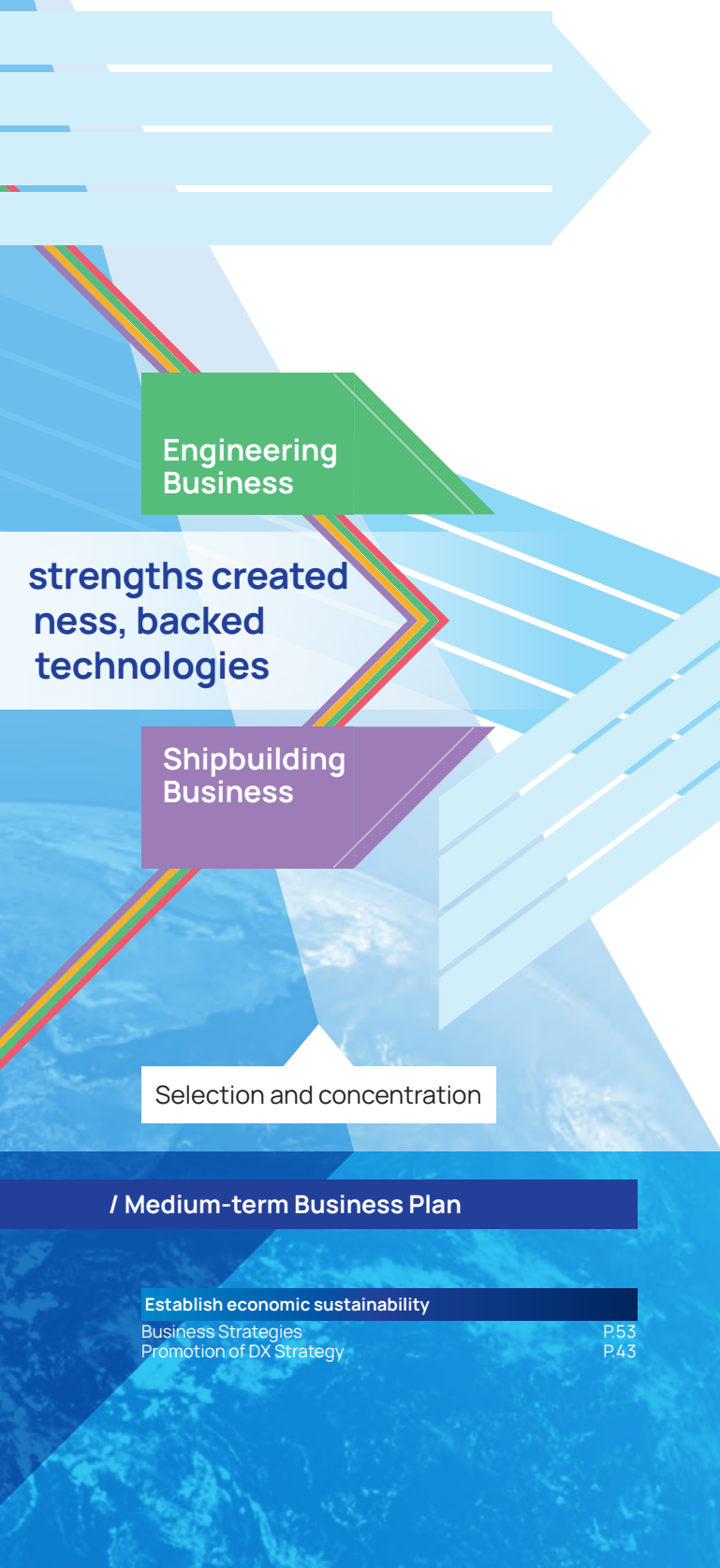
#### Business activities

#### Sustainability of the environment and society

Promotion of the JFE Group Environmental Vision for 2050 to Achieve Carbon Neutrality	P.45
Ensuring Occupational Safety and Health	P.63
Securing and Training Diverse Talent	P.65

#### Basics of business activities

Corporate Governance	P.77
Thorough Compliance	P.84
Respect for Human Rights	P.87



## Be essential to society

### Increase economic value

- Increase cash flow
- Achieve world-class earnings power
- Ongoing investment in technological development
- Return value to stakeholders
- Establish a robust financial foundation

### Increase environmental value and social value

- Become carbon neutral
- Contribute to safe and comfortable lives
- Secure excellent human resources and enhance job satisfaction
- Create a prosperous coexistence with local communities

### FY2023 results

- Contributions to resolving climate change
  - JFE Steel
    - Reductions in CO<sub>2</sub> emissions: About 17% (comparison with FY2013)
  - JFE Engineering
    - Contribution of CO<sub>2</sub> emissions reductions: 11.53 million tons
  - JFE Steel
    - Recycled water resource usage: 93.1%
- Earnings capabilities
  - JFE Group revenue: ¥5,174.6 billion
  - JFE Group business profit: ¥298.2 billion
- Increase competitiveness
  - <DX>
    - JFE Steel Data scientists: 610
  - <World-class technological capabilities>
    - JFE Steel Ratio of high-value-added products: 50%
    - JFE Group Domestic patent publications: 1,100
- Dividends
  - JFE Group Dividends per share: ¥100

Toward a Sustainable Future

# JFE is building a sustainable future.

## サス鉄ナブル!

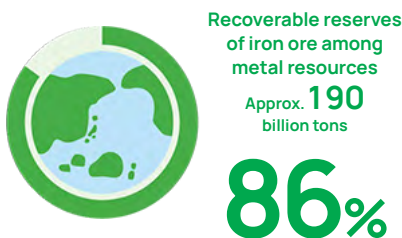
Sus-tetsu-nable!\*

\* A term unique to our Company, it combines "TETSU" ("steel" in English) and sustainability, both of which are essential to society.

### Create

Steel is a material that can be reliably produced in large quantities with less environmental impact during manufacturing!

Steel is a material that can be reliably produced in large quantities at reasonable prices thanks to technological developments, and its abundance in raw form as iron ore. Furthermore, GHG emissions from the manufacture of steel are approximately one-fourth to one-fifth of the emissions from aluminum or carbon fiber production. The amount of CO<sub>2</sub> emissions is overwhelmingly lower than other materials, making it an environmentally friendly option.

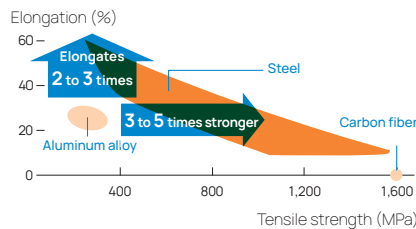


Source: Mineral Commodity Summaries (2024)

### Use

Steel continues to provide long-lasting support in everyone's lives!

Steel is an indispensable material in daily life and is used across a wide range of industries. For example, strong, thin steel sheets can be used to produce automobiles that are lightweight and safe at the same time. This helps create automobiles with better fuel economy and reduces CO<sub>2</sub> emissions in society as a whole. Compared with aluminum and carbon fiber, steel is stronger and more malleable, a material that can be used for a long time. While meeting global demand, we will contribute to reductions in CO<sub>2</sub> emissions in society.



### Recycling

Steel can be reborn again and again into anything!

Steel is a material that is easy to separate and collect, making it highly recyclable. Even after fulfilling its mission in society, steel can be recycled and transformed into high-quality products time and time again. Through recycling, it is possible to reduce the consumption of new natural resources. Moreover, recycling helps to limit the emission of CO<sub>2</sub> and generates minimal waste, thereby contributing to a sustainable future.



Source: Japan Iron and Steel Federation



# Strategy to Create Value

The JFE Group strives to achieve a balance between environmental, social, and economic sustainability. This section focuses on strategies in the Seventh Medium-term Business Plan aimed at further realizing value creation.

25	Market Trends and Business Risks and Opportunities
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33	Seventh Medium-term Business Plan (Fiscal 2021–2024)
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43	Strategy 5 Promotion of DX Strategy
45	Strategy 6 Promotion of the JFE Group Environmental Vision for 2050 to Achieve Carbon Neutrality
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56	Engineering Business
59	Trading Business
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# Market Trends and Business Risks and Opportunities



## Steel Business and Trading Business

Global demand for steel is likely to steadily increase over the long term amid economic growth in emerging countries, centered on Asia. Over the long term, we believe steel will retain its advantages over other materials, such as its overwhelming scale of production capacity, high economic viability, low environmental burden, and high processability.

With a falling birthrate and aging population shrinking the market in Japan, and depending on global economic conditions, demand for steel in Japan and other countries could have an impact on the JFE Group's steel sales volume and prices. In overseas markets, competition could intensify as a result of structural changes, such as higher exports from China as domestic demand weakens, and expansion in steel production capacity in emerging countries.

In response to such changes in the external environment, JFE is taking the following measures.

### Steel business

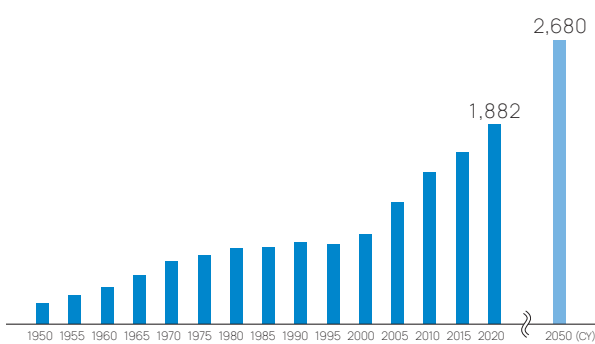
- 1) Optimize production volume in tandem with changes in supply-demand balance for steel in Japan and overseas
- 2) Build an optimal production structure by retiring and consolidating facilities
- 3) Enhance cost competitiveness through strategic investments
- 4) Increase sales ratio of technologically advanced products
- 5) Develop and expand business with the aim of further deepening integrated production in high-demand overseas markets, including the provision of advanced manufacturing technologies as well as operational and research expertise

### Trading business

- 1) Strengthen sales capabilities in Japan through a restructuring of distribution functions, upgrade processing equipment
- 2) Strengthen processing and distribution functions in our four-pronged global structure
- 3) Increase sales of JFE Steel's products in high-value-added fields
- 4) Use JFE Group materials (including alliance partners) and products of other suppliers overseas

### Global crude steel output

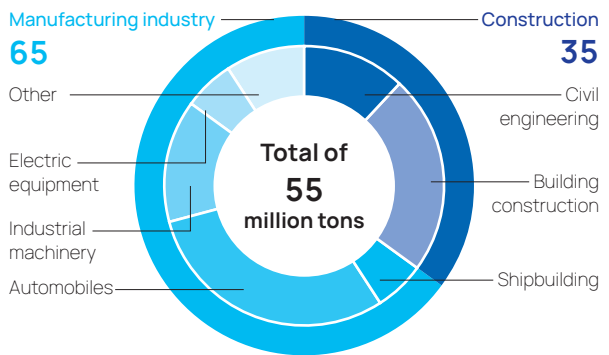
(million tons)



Source: World Steel Association (actual), Japan Iron and Steel Federation (estimates)

### Consumption of steel in Japan

(%)



## Engineering Business

Public works infrastructure accounts for a majority of the engineering business portfolio, and in recent years domestic demand has been brisk for the upgrading of environmental plants, bridges, and other core infrastructure. There is considerable potential demand for moving public services from the government to the private sector, owing to aging lifestyle infrastructure, worker shortages, and insufficient financial resources in Japan. We are expanding the operation and maintenance (O&M) business by establishing new regional power utilities in collaboration with local governments, which we have been doing for a while, and we also established an integrated utility company for gas, water, and wastewater services.

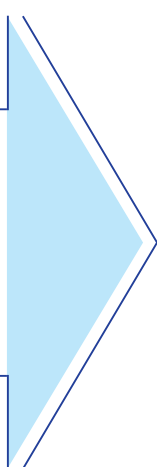
Regarding private-sector demand, initiatives are gaining momentum to reduce GHG emissions after the national government declared its goal of achieving carbon neutral by 2050.

In light of changes in society, we constructed the new Kasaoka Monopile Factory to manufacture foundational structures attached to the seabed (monopiles) for offshore wind power generation, and commenced operations of the factory in April 2024. We are also proactively developing CO<sub>2</sub> and ammonia transportation and storage technologies. To address the needs of companies for recycling, we are participating in the PET bottle recycling business and expanding bases in the food recycling business.

The JFE Group aims to forge a corporate structure where earnings are less affected by whether orders are received for public works projects that depend on the aims and policies of the national and local governments. We aim to build a stable business foundation while addressing the changing needs of society, such as by expanding our O&M business, which includes the recycling business.

## Major Risks and Opportunities for the JFE Group

Major changes in external environment	Risks	Opportunities
<p><b>Climate change problem</b></p> <ul style="list-style-type: none"> <li>● Promotion of the JFE Group Environmental Vision for 2050 to Achieve Carbon Neutrality P. 45</li> </ul>	<ul style="list-style-type: none"> <li>• Sharply growing needs for decarbonization of (blast furnace) steelmaking process</li> <li>• Higher burden of investments to introduce ultra-innovative technologies</li> <li>• Carbon tax</li> <li>• Disruptions to supply chains from natural disasters</li> <li>• Risk of flooding of bases due to rising sea level</li> <li>• Competition from other materials</li> <li>• Tougher environmental regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Development of ultra-innovative technologies and securing of competitive advantages</li> <li>• Contribution to reduction of CO<sub>2</sub> emissions by supplying high-strength steel, such as high-strength steel and electrical steel</li> <li>• Expansion of electric arc furnace steelmaking and electric arc furnace engineering business</li> <li>• Stronger demand for renewable energy solutions</li> <li>• Stronger response to disasters caused by climate change</li> </ul>
<p><b>Resource and energy problems</b></p> <ul style="list-style-type: none"> <li>● Business Strategies P. 53</li> </ul>	<ul style="list-style-type: none"> <li>• Depletion of resources, harder to obtain raw materials and equipment, rising prices</li> <li>• Higher prices for scrap waste, harder to obtain materials, lower grade ores</li> <li>• Risk of depletion of water resources, risk of pollution at drainage sites</li> </ul>	<ul style="list-style-type: none"> <li>• Renewed attention on recyclability of steel</li> <li>• Expansion of logistics business and opportunities to use scrap</li> <li>• Stronger waste-to-resource demand (plastic recycling, power generation with food waste)</li> </ul>
<p><b>Falling birthrate and aging population in Japan</b></p> <ul style="list-style-type: none"> <li>● Promotion of DX Strategy P. 43</li> <li>● Securing and Training Diverse Talent P. 65</li> </ul>	<ul style="list-style-type: none"> <li>• Labor shortage</li> <li>• Disruptions of skill transfer to next generation</li> <li>• Weaker domestic demand for steel</li> <li>• Decrease in EPC orders and projects due to shrinking private-sector investment</li> </ul>	<ul style="list-style-type: none"> <li>• Secure talented personnel with work-style reforms</li> <li>• Introduce new technologies to reduce personnel and save labor (stronger needs for automation, remote monitoring)</li> </ul>
<p><b>Globalization of markets, development of emerging countries</b></p> <ul style="list-style-type: none"> <li>● Strengthening Momentum in the Solution Business P. 39</li> <li>● Business Strategies P. 53</li> </ul>	<ul style="list-style-type: none"> <li>• Expansion of steel production capacity in emerging countries</li> <li>• Constraints on export transactions due to higher duties and import restrictions</li> <li>• Country risk, impact from higher commodity prices and foreign exchange fluctuations</li> </ul>	<ul style="list-style-type: none"> <li>• Increase in demand for steel in growth markets</li> <li>• Greater use of high-value-added products</li> <li>• Increase in infrastructure projects in emerging countries</li> </ul>
<p><b>Aging of infrastructure facilities</b></p> <ul style="list-style-type: none"> <li>● Business Strategies P. 53</li> </ul>	<ul style="list-style-type: none"> <li>• Impact from accidents and larger damage from natural disasters due to aging infrastructure</li> <li>• Contraction in domestic public utilities business from transition to preventive maintenance</li> </ul>	<ul style="list-style-type: none"> <li>• Stronger demand for infrastructure renewal, including reinforcement against natural disasters</li> <li>• Provision of high-quality products and services to meet demand for longer-living infrastructure</li> <li>• Business expansion from privatization of public services</li> </ul>
<p><b>Development of AI and IoT technologies</b></p> <ul style="list-style-type: none"> <li>● Promotion of DX Strategy P. 43</li> </ul>	<ul style="list-style-type: none"> <li>• Information leaks and system damage due to cyberattacks and illicit use of systems</li> </ul>	<ul style="list-style-type: none"> <li>• Creation of new value added and expansion of service offerings with DX and AI</li> </ul>



# Material Issues of Corporate Management

## Material Issues of Corporate Management (Materiality)

The JFE Group has identified material issues and set KPIs to address these issues with the objective of maximizing the creation of social value and minimizing its negative impact on society as Group capital is deployed to satisfy the needs of diverse stakeholders. In fiscal 2016, we identified our material CSR issues. In fiscal 2021, based on the Seventh Medium-term

Business Plan, we embarked on a new initiative and identified material issues in corporate management by adding economic issues to our existing CSR issues. We will demonstrate the Group's vision of "contributing to society with the world's most innovative technology" by working to address these issues.

### Process for identifying material issues

#### Fiscal 2016: Identifying material CSR issues

- Discuss issues at Groupwide meetings
- Prioritize issues based on stakeholder expectations and business relevance (impact on society)

#### Fiscal 2021: Identifying material issues of corporate management

##### STEP 1 Reevaluate existing material CSR issues

The material CSR issues were reassessed for their importance in terms of relating to current operations, stakeholder expectations, and achievement of KPIs.

##### STEP 2 Set material economic issues

Identify issues from an economic viewpoint based on sources of competitive advantages in the Seventh Medium-term Business Plan and the JFE Group's business model.

##### STEP 3 Select 20 material issue candidates

Economic-related issues were added to the list of reassessed material CSR issues and deliberated by the Group Management Strategy Committee, screening out 20 material issue candidates.

##### STEP 4 Identify the 13 most important material issues

The Group Management Strategy Committee and the Board of Directors discussed the candidates, and identified 13 material issues as the most important for the JFE Group

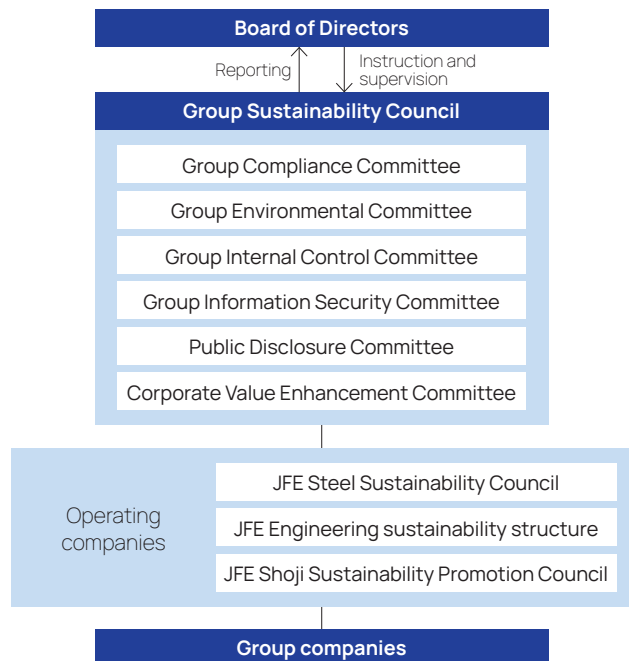
The JFE Group has set and worked toward achieving KPIs for the identified material issues. In fiscal 2023, we evaluated the results in the previous fiscal year, revised KPIs based on these results and the opinions of stakeholders, and undertook fresh initiatives to address issues. The fiscal 2023 KPIs

for material issues of corporate management were deliberated and evaluated, and fiscal 2024 KPIs were set following examination by operating companies, discussion at management meetings, and deliberations by the Group Management Strategy Committee and the Board of Directors.

## Sustainability Initiatives and Promotion Structure

The JFE Group, aware of its responsibility as a corporation and member of society, believes that striving for sustainability to build a better society is a central tenant of its management principles. Chaired by the president of JFE Holdings, the JFE Group Sustainability Council has been established as an organization for supervising and guiding Groupwide sustainability initiatives. Various committees are set up under the JFE Group Sustainability Council to deliberate Group policy; assess the state of policies, share information about issues, problems that arose; and examples of how they were addressed; supervising and guiding the Group's sustainability initiatives. Moreover, of the matters discussed by the JFE Group Sustainability Council, the Group's basic policy, action plans, details of important measures, and responses to critical events are periodically reported to and deliberated by the Board of Directors, which gives directions and supervision. Each operating company sets up their own councils to coordinate with the JFE Group Sustainability Council, working together Groupwide to improve and prevent deterioration in the JFE Group's corporate value.

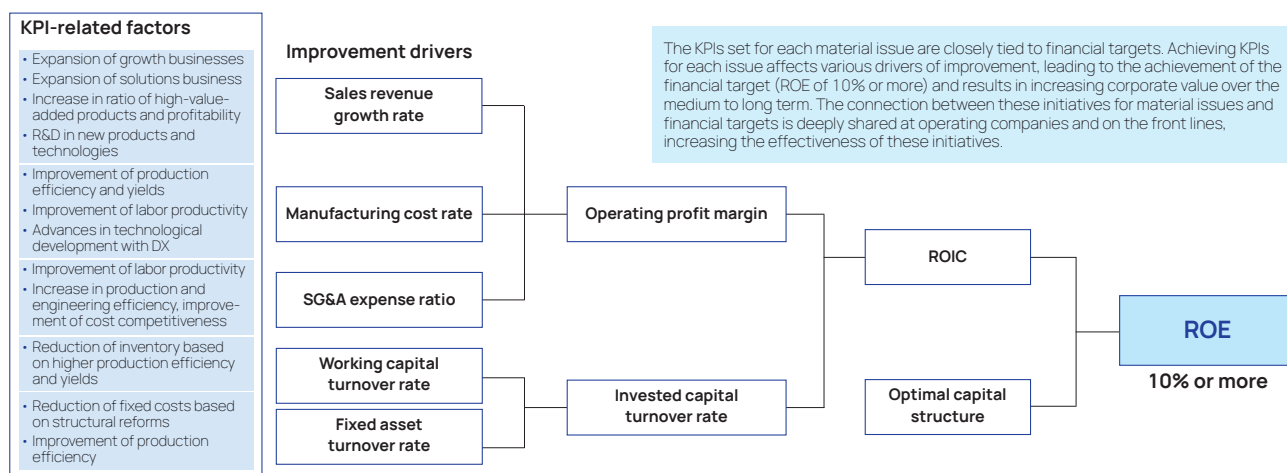
### Sustainability promotion structure



	Areas of Focus	Details	Material Issues	Relevant SDGs
Activity	<p>Contribute to resolving climate change issues (initiatives for achieving carbon neutrality by 2050)</p> <p>● P. 45</p>	<ul style="list-style-type: none"> <li>● Initiatives for achieving carbon neutrality by 2050</li> <li>● Reduce the JFE Group's CO<sub>2</sub> emissions</li> <li>● Contribute to reduction of CO<sub>2</sub> emissions in society</li> </ul>	<ul style="list-style-type: none"> <li>● Reduce the JFE Group's CO<sub>2</sub> emissions</li> <li>● Contribute to reduction of CO<sub>2</sub> emissions across the society</li> </ul>	
	<p>Ensure occupational safety and health</p> <p>● P. 63</p>	<ul style="list-style-type: none"> <li>● Prioritize safety first</li> <li>● Maintain the physical and mental health of employees and their families</li> </ul>	<ul style="list-style-type: none"> <li>● Prevent workplace accidents</li> <li>● Ensure the health of employees and their families</li> </ul>	
	<p>Recruit and nurture diverse human resources</p> <p>● P. 65</p>	<ul style="list-style-type: none"> <li>● Maintain work environments where all personnel can maximize their abilities</li> <li>● Accumulate and hand down technologies and skills</li> </ul>	<ul style="list-style-type: none"> <li>● Pursue diversity and inclusion</li> <li>● Strengthen human resources development</li> <li>● Create workplaces that motivate employees</li> </ul>	
	<p>Reinforce resilience of production and engineering capabilities (realize world-class earnings power through DX and other measures)</p> <p>● P. 37, 43</p>	<ul style="list-style-type: none"> <li>● Pursue world-class earnings power</li> <li>● Promote DX and other measures to improve production efficiency, yields, and labor productivity</li> <li>● Shift focus of steel business from quantity to quality (structural reforms)</li> <li>● Reduce costs to strengthen cost competitiveness and ensure quality competitiveness</li> </ul>	<ul style="list-style-type: none"> <li>● Increase efficiency and enhance cost competitiveness in production and engineering</li> <li>● Raise quality of products and services and ensure reliable supply</li> </ul>	
	<p>Strengthen competitiveness of products and services (promote the growth strategy by providing high-value-added solutions)</p> <p>● P. 39</p>	<ul style="list-style-type: none"> <li>● Improve margins and ensure stable earnings power</li> <li>● Increase ratio of high-value-added products and services</li> <li>● Ensure stable earnings power based on the sales strategy, including technological solutions and expansion of growth businesses</li> </ul>	<ul style="list-style-type: none"> <li>● Expand business by increasing value added in products and services with advanced technologies</li> <li>● Sales strategies for realizing sustainable growth</li> </ul>	
Basis of Activity	<p>Thoroughly enforce compliance</p> <p>● P. 84</p>		<ul style="list-style-type: none"> <li>● Ensure adherence to corporate ethical standards and compliance</li> </ul>	
	<p>Respect human rights</p> <p>● P. 87</p>		<ul style="list-style-type: none"> <li>● Respect human rights across the supply chain</li> </ul>	

● Please see page 29 for KPIs for each priority issue.

### Improvement in ROE by achieving KPIs



## Material Issues of Corporate Management and KPIs

The JFE Group has set key performance indicators (KPIs) for its initiatives to address priority issues, and worked toward achieving its targets. In fiscal 2021, the Company revised its material CSR issues, adding material economic issues to the list, and defined key issues for management. As a unified Group, we aim to contribute to the realization of sustainable growth for both the JFE Group and society as a whole by tackling these key issues for management.

Problematic fields	Priority issues	Operating company	FY2023 KPIs	
Business activities	Contribute to resolving climate change issues (initiatives for achieving carbon neutrality by 2050)	Reduce the JFE Group's CO <sub>2</sub> emissions	JFE Steel	<ul style="list-style-type: none"> <li>Achieve 75% of the CO<sub>2</sub> reduction target from energy conservation and technological development for the target of reducing CO<sub>2</sub> emissions by 18% from FY2013 levels by the end of FY2024</li> <li>Complete the approval of capital investment plans for reducing CO<sub>2</sub> emissions by 100% cumulatively for CO<sub>2</sub> reduction targets from energy conservation and technological development for the target of reducing CO<sub>2</sub> emissions by 18% from FY2013 levels by the end of FY2024</li> <li>Obtain third-party certification, and build a green steel supply structure in the first half of FY2023</li> <li>Reduce CO<sub>2</sub> emissions in its own plants and offices</li> </ul>
			JFE Engineering	
			JFE Shoji	
		Contribute to reduction of CO <sub>2</sub> across the society	JFE Steel	<ul style="list-style-type: none"> <li>Reduce CO<sub>2</sub> emissions through the procurement of electricity derived from renewable energy</li> <li>FY2023 domestic CO<sub>2</sub> emissions: Reduce by 15% from FY2019 levels (Reduce by 5% per year from FY2019 levels from FY2021 to FY2024)</li> </ul>
			JFE Engineering	<ul style="list-style-type: none"> <li>Launch sales and implement eco-friendly products and technologies*: 15 or more cases in FY2022 (the cumulative total of 60 or more cases for the period from FY2021 to FY2024)</li> <li>* Products and technologies that contribute to saving energy and resources, reduce waste and environmentally hazardous substances, and do not require hazardous substances for manufacturing or use.</li> <li>Contribute to reduction of CO<sub>2</sub> in society by providing renewable energy power generation facilities and expanding the basis of the recycling business (for plastic, food, etc.)</li> <li>Contribute to reduction in CO<sub>2</sub> emissions (FY2023): 11.5 million tons per year</li> </ul>
			JFE Shoji	<ol style="list-style-type: none"> <li>Global resource recycling of steel scrap</li> <li>FY2023 scrap transactions: Above the transaction quantity for FY2020 (FY2024 target: +5% from FY2020)</li> <li>Increase transaction quantity of fuel for biomass power generation plants and create framework for reliable supply of fuel                             <ul style="list-style-type: none"> <li>FY2023 biomass fuel (palm kernel shells and wood pellets) transactions: Above the transaction quantity for FY2020 (FY2024 target: 100% increase from FY2020)</li> <li>Diversify supply sources to ensure stable supply</li> </ul> </li> </ol>
	Ensure occupational safety and health	Prevent workplace accidents	Groupwide	<ul style="list-style-type: none"> <li>Workplace fatalities: Zero occurrences</li> <li>Lost-workday injuries rate</li> <li>0.10 or less    0.25 or less    0.45 or less</li> </ul>
			JFE Steel	[Key measures] (1) Reinforce activities to prevent similar injuries Horizontal Companywide deployment of measures, including for close calls, promote workplace activities so employees view past incidents as lessons to learn from (2) Enhance safety Install electromagnetic locks at the secondary mill entrances: 90% by FY2023, 100% by FY2024
			JFE Engineering	[Key measures] (1) Implement 100% of the following key measures to prevent injuries with decisive work plans and proper work instructions in order to eliminate serious injuries <ul style="list-style-type: none"> <li>Pre-operation checks (curing openings in high locations and edges of work floor, ensuring on-site understanding of work plans, and covering and enclosing/turning off of machinery)</li> <li>Strict adherence during operations (use of safety belts, no entry measures/allocation of worksite guides)</li> </ul> (2) Multifaceted management of occupational safety and health using IT <ul style="list-style-type: none"> <li>Monitor worksites, use information communications systems</li> <li>Use safety management operations support system</li> </ul>
		JFE Shoji	[Key measures] (1) 100% implementation of crane operation drills (once a year or more at each company) (2) Review of past incidents at the Company Finish formulating and executing measures for alternative proposals to address past incidents identified as requiring review	
Ensure the health of employees and their families	Ensure the health of employees and their families	Groupwide	<ol style="list-style-type: none"> <li>Provision rates of healthcare guidance</li> <li>60% (2023 target)</li> <li>Reduce rates of smokers (ensure employee health and prevent exposure to passive smoke)</li> <li>1.5% reduction per year (total for operating companies)</li> </ol>	
		Groupwide	<ol style="list-style-type: none"> <li>Rates for female recruits                             <ul style="list-style-type: none"> <li>Career-track (white-collar position): Degree of gender parity</li> <li>Career-track (technical position): 10% or more</li> <li>On-site position: 10% or more</li> <li>Career-track (white-collar position): Degree of gender parity</li> <li>Technical (Career-track, Production/construction position): 15% or more</li> <li>White-collar position: Degree of gender parity</li> </ul> </li> <li>Women in managerial positions                             <ul style="list-style-type: none"> <li>10% or more in positions qualified as section manager or above. Of whom, 20% or more to be in management and sales departments (FY2030 target)</li> </ul> </li> <li>Rate of male employees taking childcare leave or time off related to child-rearing                              Aim for all male employees whose spouses have given birth to take such leave or time off</li> </ol>	
Recruit and nurture diverse human resources	Pursue diversity and inclusion	Groupwide	<ol style="list-style-type: none"> <li>Rates for female recruits                             <ul style="list-style-type: none"> <li>Career-track (white-collar position): Degree of gender parity</li> <li>Career-track (technical position): 10% or more</li> <li>On-site position: 10% or more</li> <li>Career-track (white-collar position): Degree of gender parity</li> <li>Technical (Career-track, Production/construction position): 15% or more</li> <li>White-collar position: Degree of gender parity</li> </ul> </li> <li>Women in managerial positions                             <ul style="list-style-type: none"> <li>10% or more in positions qualified as section manager or above. Of whom, 20% or more to be in management and sales departments (FY2030 target)</li> </ul> </li> <li>Rate of male employees taking childcare leave or time off related to child-rearing                              Aim for all male employees whose spouses have given birth to take such leave or time off</li> </ol>	

■ Groupwide ■ JFE Steel ■ JFE Engineering ■ JFE Shoji

Evaluation criteria\*1

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

\*1 In Groupwide evaluations, the lowest result among the companies is taken as the overall result.  
 \*2 Prevention of occupational injuries evaluated as Groupwide (safety performance)

Initiatives and Results for FY2023	Assessment	FY2024 KPIs
<ul style="list-style-type: none"> <li>CO<sub>2</sub> reduction target: Achieved 93%</li> <li>Total investment budget: 101% approved</li> <li>Obtained third-party certification in June 2023, commenced supply of green steel 29,000 tons on a certified basis</li> <li>4.7% reduction from FY2013 levels (FY2013: 15,600 tons, FY2023: 8,300 tons)</li> <li>20.7% reduction from FY2019 levels</li> <li>FY2023: 16 (eco-friendly products: 7, technologies: 9) (FY2021–FY2023: 48)</li> <li>Contribute to reduction in CO<sub>2</sub> emissions (FY2023): 11.53 million tons per year</li> </ul>	<ul style="list-style-type: none"> <li>○</li> <li>○</li> <li>○</li> <li>○</li> <li>○</li> <li>○</li> <li>○</li> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>Achieve at least 18% of CO<sub>2</sub> reduction target by the end of FY2024 compared to FY2013 levels</li> <li>Achieve 100% of the CO<sub>2</sub> reduction target of 3.06 million tons through energy conservation and technological development, as part of the 18% reduction in CO<sub>2</sub> emissions by the end of FY2024 compared to FY2013 levels</li> <li>Expand adoption of JGreeX™ by stimulating demand for green steel</li> <li>Reduce CO<sub>2</sub> emissions in its own plants and offices FY2024: 40% reduction from FY2013 levels</li> <li>Reduce CO<sub>2</sub> emissions through the procurement of electricity derived from renewable energy FY2024 domestic CO<sub>2</sub> emissions: Reduce by 20% from FY2019 levels (Reduce by 5% per year from FY2019 levels from FY2021 to FY2024)</li> <li>Launch sales and implement eco-friendly products and technologies: 15 or more cases in FY2024 (cumulative total of 60 or more cases from FY2021 to FY2024)</li> <li>Contribute to reduction of CO<sub>2</sub> in society by providing renewable energy power generation facilities and expanding the basis of the recycling business (for plastics, food, etc.) Contribute to reduction in CO<sub>2</sub> emissions (FY2024): 12 million tons per year</li> </ul>
<ul style="list-style-type: none"> <li>1. Global resource recycling of steel scrap                             <ul style="list-style-type: none"> <li>5% reduction from FY2020</li> </ul> </li> <li>2. Created system for expansion and reliable supply of fuel for biomass power plants                             <ul style="list-style-type: none"> <li>Handling volume: +110% compared with FY2020</li> <li>Expanded new suppliers</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>×</li> <li>○</li> </ul>	<ul style="list-style-type: none"> <li>1. Global resource recycling of steel scrap FY2024 scrap transactions: +5% from FY2020</li> <li>2. Increase transaction quantity of fuel for biomass power generation plants and create framework for reliable supply of fuel                             <ul style="list-style-type: none"> <li>FY2024 biomass fuel (palm kernel shells and wood pellets) transactions: 100% increase from FY2020</li> <li>Diversify supply sources to ensure stable supply</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Workplace fatalities: One occurrence</li> <li>Lost-workday injuries rate</li> <li>0.06 0.28 0.12 (Work-related accidents and frequency rates are tabulated on a calendar year basis.)</li> </ul>		<ul style="list-style-type: none"> <li>Workplace fatalities: Zero occurrences</li> <li>Lost-workday injuries rate</li> <li>0.10 or less 0.25 or less 0.15 or less</li> </ul>
<p>[Key measures]</p> <ul style="list-style-type: none"> <li>(1) Strengthened activities to prevent similar accidents                             <ul style="list-style-type: none"> <li>Held Companywide monthly meetings to prevent similar accidents</li> <li>Built an accident reporting database for use at all workplaces</li> </ul> </li> <li>(2) Strengthened efforts to promote essential safety                             <ul style="list-style-type: none"> <li>Installation of electromagnetic locks at secondary mill entrances in FY2023: 100%</li> <li>Formulated plan to expand the number of sites (replace locks with electromagnetic locks)</li> </ul> </li> </ul>		<p>[Key measures]</p> <ul style="list-style-type: none"> <li>(1) Reinforce activities to prevent similar injuries Horizontal Companywide deployment of measures, including for close calls</li> <li>(2) Strengthen efforts to promote essential safety 100% installment of electromagnetic locks at secondary mill entrances versus plan by FY2024</li> </ul>
<p>[Key measures]</p> <ul style="list-style-type: none"> <li>(1) 100% implementation of key measures to eradicate serious accidents Focused on verifying and advising on work plans, inspecting equipment, and preventing unsafe behavior during site patrols Installed work platforms and handrails for high-altitude work, enforced the use of safety belts, prohibited access near suspended loads and within the operating range of heavy machinery, and checked the covers/guards and power isolation of machinery</li> <li>(2) Multifaceted management of occupational safety and health using IT                             <ul style="list-style-type: none"> <li>Used work monitoring and information transmission systems</li> <li>Remote patrols, instruction, and information sharing via webcams and large screens</li> <li>Used a safety management support system</li> <li>Promoted introduction of services such as CCUS/site management support</li> <li>Avoided rework in high places by using drones and 3D scanning</li> <li>Verified construction safety through 3D and time-series simulations</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>×</li> <li>△</li> </ul>	<p>[Key measures]</p> <ul style="list-style-type: none"> <li>(1) To eliminate serious injuries, conduct pre-operation checks of equipment in use, including work floors Decisive work plans (identify and prevent dangerous risks) Through proper work instructions (awareness of work plans and prohibition of unplanned work), raise awareness of occupational safety of related workers and take measures to prevent accidents Implement 100% of the following:                             <ul style="list-style-type: none"> <li>Pre-operation checks</li> <li>Pre-operation checks of equipment to be used, curing openings in high locations and edges of work floor, install handrails, ensure on-site understanding of work plans, and cover/enclose/turn off machinery</li> <li>Strict adherence during operations</li> <li>Use of safety belts, prohibit access under suspended loads or within the operating range of heavy machinery, assign worksite guides, disconnect power when equipment or tools are not in use</li> </ul> </li> <li>(2) Multifaceted management of occupational safety and health using IT                             <ul style="list-style-type: none"> <li>Use remote monitoring and information communications systems</li> <li>Use safety management operations support system</li> </ul> </li> </ul>
<p>[Key measures]</p> <ul style="list-style-type: none"> <li>(1) Crane operation drills: 100% implementation at least once annually at each company</li> <li>(2) Reviewed our past accidents For all 208 past accidents requiring review, we created and are implementing alternative solutions</li> </ul>		<p>[Key measures]</p> <ul style="list-style-type: none"> <li>(1) 100% implementation of crane operation drills (once a year or more at each company)</li> <li>(2) Advance hardware measures (introduce interlocks for coil lifting equipment) Complete measures for 24 applicable machines in FY2024</li> <li>(3) Reevaluate and update education system for new employees and reassigned employees</li> </ul>
<ul style="list-style-type: none"> <li>1. Provision rates of healthcare guidance</li> <li>71.1% 42.7% 35.0%</li> <li>*FY2022 results for eligible individuals</li> <li>2. Reduce rates of smokers (ensure employee health and prevent exposure to passive smoke)</li> <li>0.8% reduction per year (total for operating companies)</li> </ul>	<ul style="list-style-type: none"> <li>×</li> <li>×</li> </ul>	<ul style="list-style-type: none"> <li>1. Provision rates of healthcare guidance</li> <li>60%</li> <li>2. Reduce rates of smokers (ensuring employee health and preventing passive smoking)</li> <li>1.5% reduction per year (total for operating companies)</li> </ul>
<ul style="list-style-type: none"> <li>1. Rates for female recruits</li> <li>Career-track (white-collar position): 39%</li> <li>Career-track (technical position): 11%</li> <li>On-site position: 7%</li> <li>Career-track (white-collar position): 50%</li> <li>Technical (career-track, production/construction position): 14%</li> <li>White-collar position: 47%</li> <li>2. Women in managerial positions</li> <li>5.9% in positions qualified as section manager or above. Of whom, 7.2% in management and sales departments (total for operating companies)</li> <li>3. Rate of male employees taking childcare leave or time off related to child-rearing</li> <li>91% (total for operating companies)</li> </ul>	<ul style="list-style-type: none"> <li>△</li> <li>△</li> <li>△</li> </ul>	<ul style="list-style-type: none"> <li>1. Rates for female recruits</li> <li>Career-track (white-collar position): Degree of gender parity</li> <li>Career-track (technical position): 10% or more</li> <li>On-site position: 10% or more</li> <li>Career-track (white-collar position): Degree of gender parity</li> <li>Technical (career-track, production/construction position): 15% or more</li> <li>White-collar position: Degree of gender parity</li> <li>2. Women in managerial positions</li> <li>10% or more in positions qualified as section manager or above. Of whom, 20% or more to be in management and sales departments (FY2030 target)</li> <li>3. Rate of male employees taking childcare leave or time off related to child-rearing Aim for all male employees whose spouses have given birth to take such leave or time off</li> </ul>

Material Issues of Corporate Management and KPIs

Problematic fields		Priority issues	Operating company	FY2023 KPIs
Business activities	Recruit and nurture diverse human resources	Strengthen human resources development	Groupwide	1. Training hours per person ■ 40 hours or more per year ■ 20 hours or more per year ■ 20 hours or more per year 2. Train DX personnel ■ Number of internal data scientist trainees: Total of 600 as of the end of FY2023 ■ Number of employees who took internal data scientist training: Total of 170 as of the end of FY2023
		Create work environment that motivate employees		1. ■ Annual leave acquisition rate of 75% or more (total for operating companies) 2. Engagement survey ■ Affirmative response to questions about motivation: At least 75%
	Reinforce resilience of production and engineering capabilities (realize world-class earnings power through DX and other measures)	Increase efficiency and enhance cost competitiveness in production and engineering	JFE Steel	1. Improvement in labor productivity Toward improving labor productivity by 20% by the end of FY2024 • Steadily implement FY2024 milestones each fiscal year for improving labor productivity by 20% • Approve and implement FY2023 investments for improving labor productivity, such as automation and remote operations • Steadily relocate facilities in accordance with structural reforms in Keihin district 2. Improve yields through DS* activities Stabilize production with DS, improve yields through application of quality prediction Improve yields by 1.5% in FY2023 from FY2020 levels to achieve 2.0% by FY2024 (based on figures after adjustments to the sales mix) * DS: Data science
			JFE Engineering	• Increase the efficiency of engineering operations by introducing DX technologies Engineers for big data analysis utilizing Pla'cello*: 2,200 * Pla'cello: Proprietary data analysis platform using AI
		Raise quality of products and services and ensure reliable supply	JFE Steel	1. Ensure quality • Continue implementing activities for raising awareness of quality compliance for the Company and Group companies in accordance with the Japan Iron and Steel Federation's guidelines for strengthening the quality assurance system • Promote automated transmission of tensile test results at Group companies Target six companies: 67% introduction rate as of FY2024 (100% by FY2025) 2. Strengthen the manufacturing infrastructures using DX Achieve CPS* installation rate of 60% or more on a companywide basis in FY2023 to implement CPS in all production processes * CPS: Cyber-physical system
			JFE Engineering	1. Secure a stable number of certificated managing engineers 2. No major quality problems
	Strengthen competitiveness of products and services (promote the growth strategy by providing high-value-added solutions)	Expand business by increasing value added in products and services with advanced technologies	JFE Steel	1. Pursue strategic research and development focusing on priority development fields* Develop new products and technologies FY2023: 20 or more cases (80 or more cases in total from FY2021 to FY2024) * Automobiles, energy, infrastructure construction materials, DX technology, and GX technology 2. High-value-added product sales volume ratio in FY2023: 48% 3. Aiming to triple revenue in solution business by FY2024 compared with FY2020 levels • Develop new products that feature DS technology, facility diagnosis technology, and safety technology, launch sales activities to customers • Double revenue in solution business by FY2023 compared with FY2020 levels
			JFE Engineering	1. Develop technologies in four priority fields of waste to resources, carbon neutrality, combined utility services, and DX, and 70% or more of R&D expenses on these four fields 2. Number of patent applications: 80 or more per year
			JFE Steel	• Expand the earnings difference between high-value-added products (A-rank products) and commodity products to ¥6,000 per ton (Achieve 150% of FY2024 target)
		Sales strategies for realizing sustainable growth	JFE Engineering	Expand the stable earnings base Expand the operating businesses • Sales: ¥260 billion • Expand bases: 3 or more bases Recycling business (food, plastics, electronic appliances, etc.), regional electricity retail new power business, and waste processing business
JFE Shoji			• Increase competitiveness of products and services by improving value added in supply chain management through business expansion Make investments to improve value added in supply chain: 5 or more per year	
Basis of activity	Thoroughly enforce compliance	Ensure adherence to corporate ethical standards and compliance	Groupwide	1. Steady execution of training to foster and maintain a sense of compliance (100% attendance from the target audience) 2. Improve employee awareness of ethics reflected in the Corporate Ethics Awareness Survey
	Respect human rights	Respect human rights across the supply chain		1. 100% attendance from the target audience for human rights awareness training 2. Implement human rights due diligence



■ Groupwide ■ JFE Steel ■ JFE Engineering ■ JFE Shoji

Initiatives and Results for FY2023	Assessment	FY2024 KPIs
1. Training hours per person ■ 44.9 hours per year ■ 23.4 hours per year ■ 22.1 hours per year	○	1. Training hours per person ■ 40 hours or more per year ■ 20 hours or more per year ■ 20 hours or more per year
2. Trained DX personnel ■ Cumulative total as of end of FY2023: 610 ■ Cumulative total as of end of FY2023: 179	○	2. Train DX personnel ■ Number of internal data scientist trainees: Total of 660 as of end of FY2024 ■ Number of employees who took internal data scientist training: Total of 210 as of end of FY2024
1. ■ Annual leave acquisition rate: 89% (total for operating companies)	○	1. ■ Annual leave acquisition rate: 75% or higher (total for operating companies)
2. Affirmative response to questions about motivation in engagement survey ■ 72% ■ 81% ■ 80%	△	2. Engagement survey ■ Affirmative response to questions about motivation: At least 75%
1. Improvement in labor productivity • Measures underway to reach milestones in each fiscal year toward achieving 20% improvement in labor productivity (81% progress toward 75% target with linear interpolation) • Approved ¥8.5 billion for 64 projects as planned for investments to improve labor productivity through automation and remote operations in FY2023 • Relocated facilities as planned in line with structural reforms in Keihin district in September 2023	○	1. Improvement in labor productivity • Improve labor productivity by 20% by end of FY2024 • Steadily execute investments aimed at improving labor productivity through automation and remote work
2. FY2023 yield: +1.3% compared to FY2020 (87.4%)	△	2. Stabilize production with DS, improve yields through application of quality prediction technologies FY2024 yields: +2.0% compared to FY2020 * Adjusted for sales composition
• Big data analysis engineers: Approx. 2,250 (about 1,950 in FY2022)	○	• Increase the efficiency of engineering operations by introducing DX technologies AI and big data analysis engineers utilizing Pla'cello: 2,400
1. Quality assurance • Reorganized to strengthen personnel development, budget allocation, and qualification acquisition in the quality assurance department • 74.8% in FY2023	○	1. Ensure quality • Continue implementing activities for raising awareness of quality compliance for the Company and Group companies in accordance with the Japan Iron and Steel Federation's guidelines for strengthening the quality assurance system • Promote automated transmission of tensile test results among Group companies Targeting six companies: 83.5% introduction ratio in FY2024 (100% in FY2025)
2. Strengthened production infrastructure using DX Companywide CPS installation rate: 60%	△	2. Strengthen manufacturing infrastructure using DX Companywide CPS installation rate: 80% or more
1. Reliably secured certificated managing engineers amid high level of sales	○	1. Secure a stable number of certified managing engineers
2. Major quality issues: One incident	×	2. Enhance information sharing and verification functions by improving operation of quality management systems No major quality problem
1. Steady capital investment in the distribution and processing operations Selected and executed necessary investments to ensure stable supply of products in FY2023 Investment amount: ¥16.5 billion	○	1. Make consistent investment in processing and distribution operations
2. Conducted quality audits on Group companies Conducted quality audits at 36 companies (100% audit implementation rate)	○	2. Conduct quality audits at Group companies Continue conducting quality audits at 36 Group manufacturing affiliate companies in Japan and overseas (same as FY2023) (Audits completed: 100%)
1. Advanced strategic research and development in key development areas New products and technologies developed: 27 (8 new products, 19 new technologies) (Cumulative total from FY2021 to FY2023: 70)	○	1. Pursue strategic research and development focusing on priority development fields Develop new products and technologies: 20 or more
2. FY2023 sales ratio of high-value-added products: 50%	○	2. Increase sales ratio of high-value-added products FY2024 high-value-added product sales ratio: 50%
3. Exceeded the goal of doubling revenue in solution business in FY2022 compared to FY2020 by winning orders and steadily executing contracts Developed and began sales activities for new products utilizing digital solution and maintenance technologies	○	3. Expand the solution business • Triple solution business revenue in FY2024 compared to FY2020 • Win three or more orders for new JFE Resolus™ brand products, lay the groundwork for significant growth in JFE Resolus™ during the next medium-term plan
1. R&D expense ratio in the four priority fields: 86%	○	1. Develop technologies in four priority fields of waste to resources, carbon neutrality, combined utility services, and DX Ratio of R&D expenses on these four fields: 70% or more
2. Number of patent applications: 100 per year	○	2. Number of patent applications: 80 or more annually
• Earnings difference between high-value-added products (A-rank products) and commodity products FY2023: +¥8,200 per ton (roughly double the initial target for FY2024)	○	• Expand the earnings difference between high-value-added products (A-rank products) and commodity products Maintain earnings difference of ¥8,000 per ton (double the target for FY2024)
• Sales of operating businesses: ¥262.3 billion • New bases: 6 bases 4 recycling businesses, 2 waste treatment	○	Expand operating businesses to expand the stable earnings base • Sales: ¥265 billion • Base expansion: 3 or more bases Recycling business (food, plastics, electronic appliances, etc.), regional electricity retail new power business, and waste processing business
• Investments to improve value added in supply chain: 5 per year	○	• Enhance the competitiveness of products and services by increasing added value in the supply chain through business expansion Make investments to improve value added in supply chain: 5 or more per year
1. Participation rate: 100% (rank-based compliance training, training on different laws and regulations, etc.)	○	1. Steady execution of training to foster and maintain a sense of compliance (100% attendance from the target audience)
2. Addressed issues identified in the FY2022 Corporate Ethics Awareness Survey • Revised and enhanced compliance training to prevent harassment • Expanded the multi-angle evaluation system for management • Continued education on proper labor time management	○	2. Affirmative response rate of 75% or higher to questions related to compliance awareness in the Corporate Ethics Awareness Survey
1. Participation rate: 100%	○	1. Participation rate of targeted attendees in human rights awareness training: 100%
2. Conducted human rights due diligence Promoted the following initiatives to ensure respect for human rights throughout the supply chain: [Created a human rights risk management system for suppliers] Conducted a human rights risk survey using the CSR Procurement Self-Assessment Tool of Global Compact Network Japan for approximately 400 high-priority suppliers, including those in countries with a high risk of human rights violations [Expanded human rights due diligence to Group companies] • In FY2023, conducted human rights risk surveys at approximately 100 major domestic Group companies with considerable exposure to human rights risks in terms of revenue size	○	2. Promote human rights due diligence Promote the following initiatives to realize respect for human rights throughout the supply chain: [Build a system for managing human rights risks of suppliers] • Provide feedback on the results of the FY2023 supplier survey, and offer support for improvement to those identified as needing follow-up support [Expand human rights due diligence to Group companies] • Conduct human rights risk surveys at overseas Group companies, prioritizing those located in countries at high risk of human rights violations • Continue to support the correction and improvement of human rights risks at major domestic Group companies that have already been surveyed, while considering regular risk surveys and methods for checking corrective measures

# Seventh Medium-term Business Plan (Fiscal 2021–2024)

Briefing Materials on the Seventh Medium-term Business Plan  
<https://www.jfe-holdings.co.jp/en/investor/management/plan/>

## 01 Establish economic sustainability

### Balance financial soundness with the effective execution of investment based on selection and concentration

#### ● P.34 Strategy 1 Financial Strategy: Message from the CFO

		Seventh Medium-term Business Plan FY2024	
Groupwide	Consolidated business profit	¥320billion	
	Profit attributable to owners of the parent	¥220billion	
	ROE	10%	
	Debt/EBITDA ratio	Around 3x	
	D/E ratio*1	About 70%	
Operating companies	Steel business	Profit per ton*2	¥10,000/ton
		Segment profit	¥230 billion
	Engineering business	Segment profit	¥35 billion
		Revenue	¥650 billion
	Trading business	Segment profit	¥40 billion
	Shareholder returns	Dividend payout ratio	About 30%

\*1 For liabilities with equity subject to credit ratings, these equities reflect the evaluations of rating agencies.

\*2 Steel business profit per ton (Segment profit / unconsolidated sales volume in tons)

### Shift focus from quantity to quality in the domestic steel business

- P.37 Strategy 2 Shift focus from Quantity to Quality
  - Cost reduction target: ¥120.0 billion for four years
  - Improvement in labor productivity: +20%
  - Ratio of high-value-added products: 50%

### Promote growth strategies

- P.39 Strategy 3 Strengthening Momentum in the Solution Business
- P.53 Steel Business
  - Steel business: Establishment of a joint venture with India's JSW Steel to manufacture and sell electrical steel sheets, and expansion of the solutions business
  - Engineering business: Expand business to ¥1 trillion in sales by fiscal 2030
  - Trading business: Strengthen supply chain management for high-performance electrical steel sheets

### Greatly improve competitiveness with DX strategy

- P.43 Strategy 5 Promotion of DX Strategy
  - Promotion of DX across all business areas, focusing on three areas: innovatively improving productivity, transforming existing businesses, and creating new businesses

## 02 Ensuring environmental and social sustainability

### Environment Promotion of the JFE Group Environmental Vision for 2050

#### ● P.45 Strategy 6 Promotion of the JFE Group Environmental Vision for 2050 to Achieve Carbon Neutrality/Advancing the Commercialization of Offshore Wind Power Business

- Steel Business: Reduce CO<sub>2</sub> emissions by 18% by the end of fiscal 2024 (compared to fiscal 2013)
- Initiatives to achieve carbon neutrality by 2050

Reduce CO<sub>2</sub> emissions in the steel business, contribute more to reducing CO<sub>2</sub> emissions in society, and promote initiatives in the offshore wind power business

### Governance Further enhancing corporate governance

#### ● P.77 Corporate Governance

- Examine applying non-financial indicators to various indicators such as investment decisions and executive compensation

### Society Resolving social issues

- Safety and health management ● P.63 Human Resources
- Promote human resource development ● P.63 Human Resources
- Contribute to regional communities through the engineering business ● P.56 Engineering Business
- Respect for human rights within the supply chain ● P.87 Respect for Human Rights

Seventh Medium-term Business Plan: **Strategy 1**

# Financial Strategy: Message from the CFO

The JFE Group aims to double business profit while taking a financially disciplined approach to making aggressive investments, based on the stable earnings foundation established under the Seventh Medium-term Business Plan. The Company is keen to develop ultra-innovative technologies to realize carbon neutrality.

## Masashi Terahata

Executive Vice President and CFO  
JFE Holdings, Inc.



## Review of the Seventh Medium-term Business Plan through Fiscal 2023

### Earnings Conditions

In fiscal 2023, although the Japanese economy and the global economy showed a moderate recovery overall, earnings stalled due to a slump in the Chinese economy, rising geopolitical risks, and challenges in Japan, such as labor shortages and surging materials costs, particularly in the civil engineering and construction fields. In this difficult business environment, the Company raised selling prices and significantly lowered the break-even point by cutting fixed costs through structural reforms in Japan, recording business profit of ¥298.2 billion and profit attributable to owners of parent of ¥197.4 billion. JFE made solid progress toward its medium-term goal of shifting from quantity to quality.

### Cash Flow and Financial Soundness

In total for the past three years, investment outlays were ¥985.2 billion, approximately 70% of the medium-term target, in line with our financial policy of keeping investment within the scope of after-tax, post-dividend profit plus depreciation. The Company reduced assets by ¥33.0 billion in fiscal 2023, bringing the total to ¥120.3 billion over the past three years. In September 2023, the Company raised ¥204.5 billion (¥114.5 billion from the issuance of new shares and disposal of treasury stock, and ¥90.0 billion from the issuance of convertible bonds with stock acquisition rights) through an international offering. We believe this funding has increased financial flexibility and has strengthened the financial foundation, enabling steady progress on green transformation (GX) initiatives, which are essential for the future, while continuing to pursue sustainable profit growth. As a result, the net interest-bearing debt balance decreased by ¥76.6 billion compared with the end of fiscal 2020, when the medium-term business plan was launched, reaching ¥1,587.1 billion. Moreover, the debt/EBITDA ratio was 3.2 times, and the debt-to-equity (D/E) ratio was 58.0%, significantly surpassing the medium-term target of 70%.

### Total Consolidated Cash Flow from FY 2021 to FY 2023

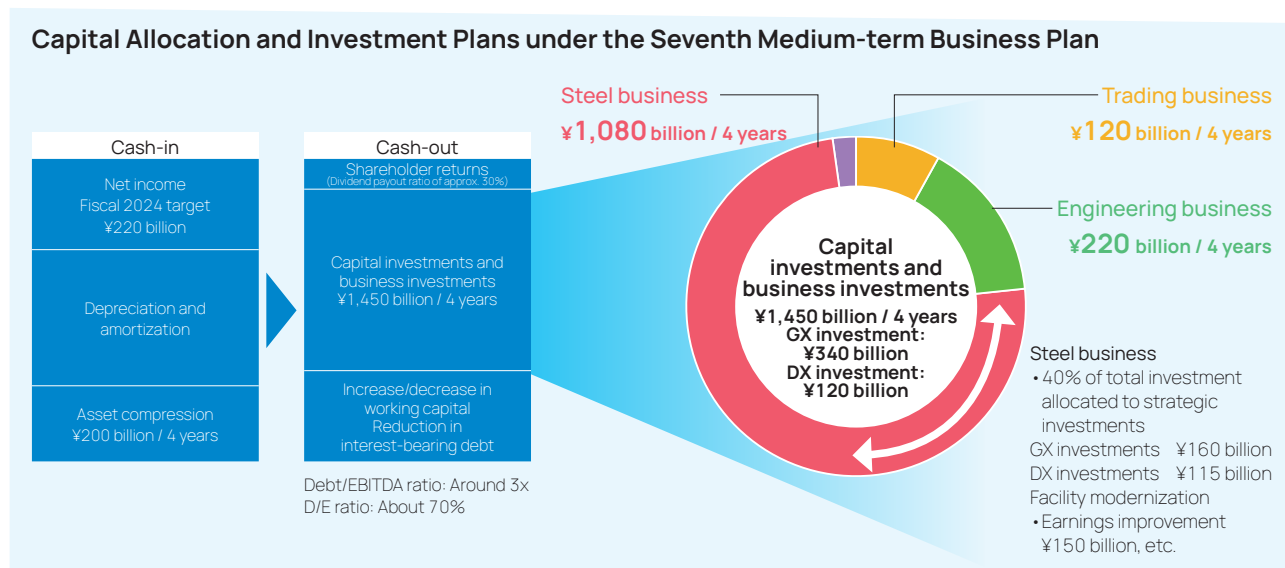
Cash-in	Cash-out
Net income* ¥648.0 billion	Dividend payment ¥164.7 billion
Depreciation and amortization ¥795.9 billion	Capital investments and business investments ¥985.2 billion
Asset compression ¥120.3 billion	Working capital, etc. ¥452.2 billion
Capital increase ¥114.5 billion	Increase in cash and cash equivalents ¥100.7 billion
Debt ¥24.1 billion	

\* Profit attributable to owners of parent

### Trends in major financial indicators

	End of FY2020	End of FY2023
Interest-bearing debt outstanding	¥1,806.1 billion	¥1,830.2 billion
Net interest-bearing debt balance	¥1,663.7 billion	¥1,587.1 billion
Debt/EBITDA ratio	8.1 times	3.2 times
D/E ratio	93.2%	58.0%

Seventh Medium-term Business Plan: Strategy 1



### Outlook for Fiscal 2024 (Final Year of the Seventh Medium-term Business Plan)

In fiscal 2024, the final year of the Seventh Medium-term Business Plan, the Company expects to secure business profit of ¥308 billion (excluding inventory valuation differences in the steel business), slightly below the medium-term target due to a one-off decline in steel demand, stemming from cuts in automobile production in the first half of the fiscal year. Even in a challenging business environment characterized by slack demand and stagnant market conditions overseas, the Company anticipates achieving profit of ¥10,000 per ton of steel, on a par with its medium-term target. We estimate net profit will be ¥205 billion in fiscal 2024.

Regarding cash flow, while securing a profit, the Company plans to keep cash used in investing activities at a high level in order to accelerate investments in GX and DX.

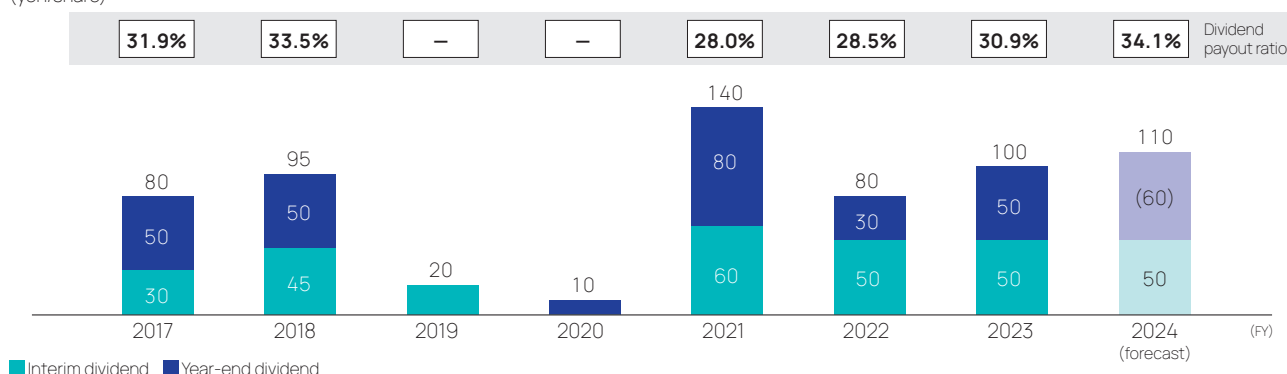
At the same time, we expect to attain our medium-term target for ¥200 billion in asset reductions during the four years of the medium-term business plan, owing in part to the sale of some land in the Keihin district. Furthermore, management continues efforts to improve the cash conversion cycle (CCC). We would like to keep the balance of interest-bearing debt steady through these initiatives.

For shareholder returns, JFE is committed to proactively returning value to shareholders based on the policy in its medium-term business plan for a dividend payout ratio of about 30%. Based on its estimate of net profit for fiscal 2024, the Company anticipates distributing a dividend of ¥110 per share, a 10% increase from the previous fiscal year, for a dividend payout ratio of 34.1%.

		Seventh Medium-term Business Plan: FY2024	FY2021 results	FY2022 results	FY2023 results	FY2024 (assumes August 5 announcement)
Consolidated	Business profit (Excluding inventory valuation differences in the steel business)	¥320.0 billion	¥416.4 billion (¥222.4 billion)	¥235.8 billion (¥162.8 billion)	¥298.2 billion (¥296.2 billion)	¥260.0 billion (¥308.0 billion)
	Profit attributable to owners of parent	¥220.0 billion	¥288.0 billion	¥162.6 billion	¥197.4 billion	¥205.0 billion
	ROE	10%	15.7%	7.9%	8.6%	8.1%

#### Dividend Payments

(yen/share)



## Aiming to Improve Corporate Value Further

JFE views its share price as an important management indicator. However, JFE's stock currently trades at a price-to-book (P/B) multiple that is significantly lower than 1.0 times. Under the Seventh Medium-term Business Plan, JFE aims to maintain ROE above the cost of equity (at least

10%), but has failed to achieve this goal.

In order to improve the P/B multiple, JFE needs to expand ROE while at the same time reducing the cost of equity and improving the expected growth rate.

$$\text{P/B multiple} \uparrow = \frac{\text{ROE} \uparrow}{\text{COE}^* \downarrow - g \text{ (expected growth rate)} \uparrow}$$

\* Cost of equity: The minimum rate of return expected of JFE by the capital market.

To expand ROE, it is essential to enhance asset efficiency and improve profitability (boost ROIC), as well as optimize the capital structure. Given the substantial capital investments required to achieve carbon neutrality in the future, it is critical that JFE maintains its financial soundness at this stage. In the previous fiscal year, JFE increased capital and was able to create an optimal capital structure. However, we recognize that improving profitability further remains a key challenge.

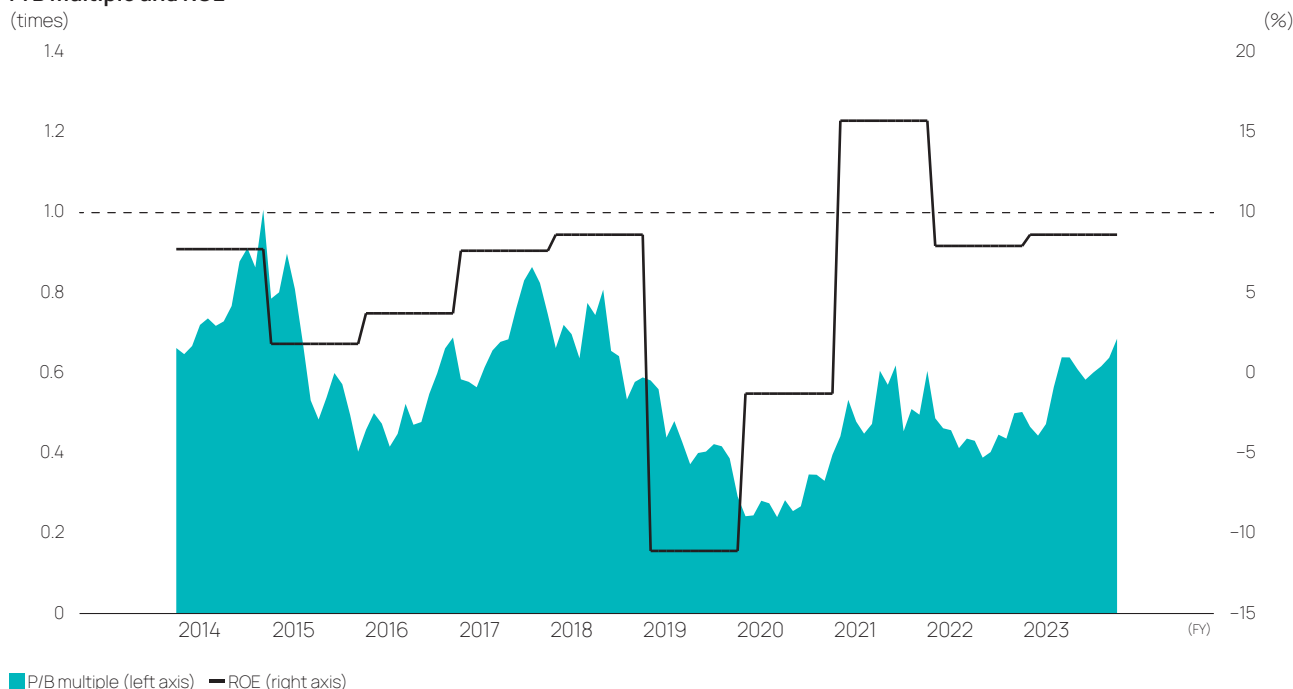
In terms of reducing the cost of equity and increasing our expected growth rate, the Company is keenly aware of the challenges posed by high earnings volatility in the steel industry, and the significant uncertainties in the steel sector's future, including how to deal with a decline in domestic growth expectations due to the aging population and other factors, and the need to address decarbonization.

Under the Seventh Medium-term Business Plan, JFE has made progress on reducing **earnings volatility** by implementing structural reforms in the steel business and shifting

its focus from quantity to quality, which has led to the creation of a structure for steady earnings generation more resilient to external factors. As we look to **further enhance profitability and meet growth expectations**, we are formulating an action plan that will guide our efforts during the next medium-term business plan, which will commence in fiscal 2025, in line with our long-term vision. Under the plan, we will present a growth strategy that the market will appreciate through aggressive investments in growth fields and regions in order to double the Group's business profit, all while maintaining financial discipline with a base of stable earnings. Additionally, as **a step toward decarbonization**, we are committed to finishing the development of ultra-innovative technologies by the mid-2030s to realize carbon neutrality.

The Company will actively disclose information about these initiatives, including through IR activities. JFE aims to keep ROE above the cost of equity, thereby enhancing corporate value and improving market perceptions.

### P/B multiple and ROE



## Seventh Medium-term Business Plan: Strategy 2

# Shift focus from Quantity to Quality

The JFE Group is committed to reinforcing its earnings foundation and improving profit per ton of steel by cutting fixed costs and increasing the ratio of high-value-added products.

STRATEGY / 2

### Pursuing World-Class Earnings Power

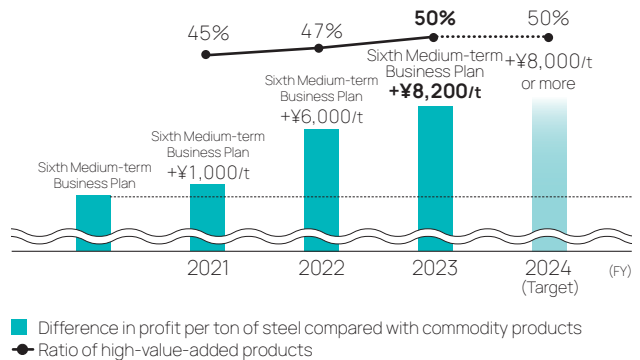
As part of the shift from quantity to quality under the Seventh Medium-term Business Plan, the JFE Group has focused on expanding sales of highly profitable, high-value-added products, a core strength of the Company. In fiscal 2023, the sales ratio of high-value-added products reached 50%. The earnings difference between high-value-added products and commodity products also widened to ¥8,200 per ton compared with the Sixth Medium-term Business Plan. To further increase sales of high-value-added products, we are expanding production capacity at the West Japan Works (Kurashiki district) for high-grade electrical steel used in EV motors, demand for which is likely to strengthen. In the first half of fiscal 2024, an expanded production line began operations at West Japan Works (Kurashiki district). Additionally, JFE Steel has established a production and supply system for large, extra-heavy steel plates that support the enormous wind turbines used in offshore wind power generation, a renewable energy market with significant growth potential. We have also started deliveries for overseas offshore wind power projects.

Overseas, the JFE Group is leveraging its strengths in high-value-added products to expand business. In India, where electricity demand is expected to grow, JFE Steel has established a joint venture with JSW Steel to manufacture and sell grain-oriented electrical steel sheet that is used in transformers.

To move forward on these initiatives, we have allocated 15% more resources to R&D and capital expenditures compared to the Sixth Medium-term Business Plan. In research and development, which underpins our shift from quantity to quality, we are developing unique products that anticipate customer needs, based on our corporate vision of "contributing to society with the world's most innovative technology." We are forging ahead on the development of new products and technologies, such as high-strength steel

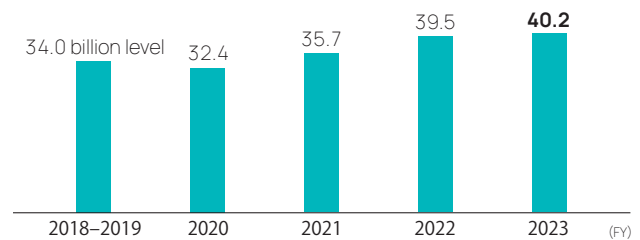
sheets that contribute to vehicle weight reduction, and materials that enhance the longevity of steel structures.

#### Difference in profit per ton of steel compared with commodity products / ratio of high-value-added products



#### R&D expenditures (Steel business)

(billion yen)



### Expansion in Sales of High-Value-Added Products

#### Ultra-high-strength steel sheets for automobiles

- Helps reduce vehicle weight  
Adoption of 1.5 GPa high-strength steel for vehicle frame components
- Development of high-strength steel applications in BEVs  
Adoption of 980 MPa high-strength steel for battery structural components



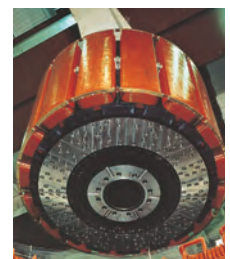
#### Heavy plates

- Foundation structure of fixed-bottom offshore wind power installations  
J-TerraPlate™, large and heavy steel plates
- Contributes to longevity of bridges in Japan and overseas  
AFD™ Steel, anti-fatigue-damage steel  
LALAC™-HS, highly weather-resistant steel plates



#### Electrical steel sheets

- Contributes to energy savings in EVs and other applications  
Non-oriented electrical steel sheets
- Contributes to highly efficient power generation and transmission networks  
Grain-oriented electrical steel sheets
- Contributes to the reduction of noise and size in electrical equipment  
Super Core™



## Creation of a Framework for Expanding High-Value-Added Products

The JFE Group is planning and making investments to augment production facilities in both Japan and overseas, focusing on high-value-added products that are likely to see market growth in a carbon neutral society.

### Establishment of mass production system for large and heavy steel plates for offshore wind power

- **West Japan Works (Kurashiki district)**  
JFE Steel has invested in the No. 7 continuous casting machine, which began operating in fiscal 2021, and then in the heavy steel plate works and peripheral facilities. Together with the heavy steel plate works in the Keihin district, JFE Steel has established a mass production system.



### Expansion of production capacity for top-grade non-oriented electrical steel sheets for EVs

- **West Japan Works (Kurashiki district)**  
We are expanding facilities for producing electrical steel sheet with the goal of doubling capacity by the first half of fiscal 2024 and tripling it by fiscal 2026.



### Establishment of a manufacturing and sales company for grain-oriented electrical steel sheets used in transformers

- In partnership with JSW Steel in India, we aim to achieve full-scale production in fiscal 2027, contributing to the development of greener power transmission infrastructure with our high-value-added products, which excel in energy efficiency, a strength we have cultivated over many years.

## Completion of Structural Reforms

The September 2023 suspension of upstream processes and hot-rolled steel facilities in the Keihin district marked the completion of the series of structural reforms aimed at transforming JFE Steel into a lean and resilient company. Cost cuts, including fixed cost reductions, should be roughly ¥42 billion in fiscal 2024, putting the Company on track to achieving the ¥120 billion target for cost reductions in the Seventh Medium-term Business Plan. Furthermore, we are enhancing our ability to secure stable earnings even in challenging business conditions, by reducing costs significantly and by improving quality and productivity with DX technologies.

### Progress on cost reductions

FY	Cost reduction effect (structural reforms + operational improvements)	Main structural reform initiatives
Up to FY2022	¥38 billion	(FY2021) Refurbishment of No. 4 blast furnace at Kurashiki (FY2022) Suspension of can steel production facilities at Chiba, consolidation at Fukuyama, refurbishment of No. 6 blast furnace at Chiba
FY2023	¥45 billion	Suspension of upstream processes and hot-rolled steel facilities at Keihin
FY2024	¥42 billion	-
Medium-term target	¥120 billion	Establishment of an optimal production framework with seven blast furnace structure

## COLUMN Keihin Land Utilization

### Reducing Fixed Costs and Establishing New Earnings Pillars

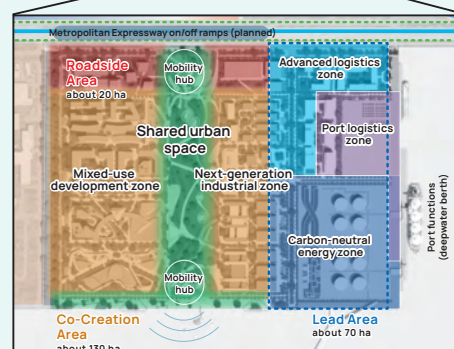
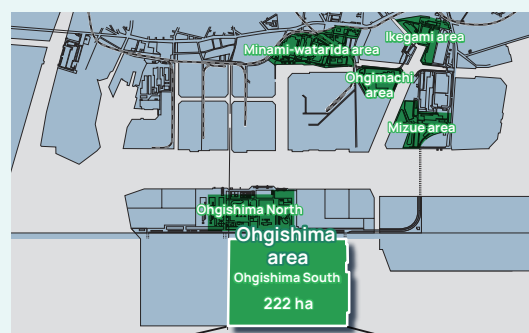
Following structural reforms, approximately 400 hectares of land in the Keihin district are now available for repurposing. Through a proper combination of land sales, land leasing, and business use, we will collaborate with local governments and neighboring companies to spearhead urban development that supports Japan's carbon neutrality goals.

In the Ohgimachi area, a portion of the land was sold in 2023, marking the first step toward new utilization. In the northern part of the Minami-watarida north area, we are advancing plans for urban development with a focus on R&D functions.

In the pioneering area of Ohgishima, JFE has signed a land lease agreement with Japan Suiso Energy, Ltd. to serve as a receiving terminal for the world's first commercial demonstration for building a liquefied hydrogen supply chain. This initiative will contribute to the start of hydrogen supply within Japan during fiscal 2030.

Moving forward, JFE intends to participate in the hydrogen supply chain by exploring projects to supply green electricity by utilizing hydrogen at its own power plants, and evaluate projects to provide cooling generated from hydrogen supply and heating from power generation to the district. These efforts are aimed at enhancing the environmental value of OHGISHIMA 2050.

### JFE Steel East Japan Works (Keihin district)



Seventh Medium-term Business Plan: **Strategy 3**

# Strengthening Momentum in the Solution Business

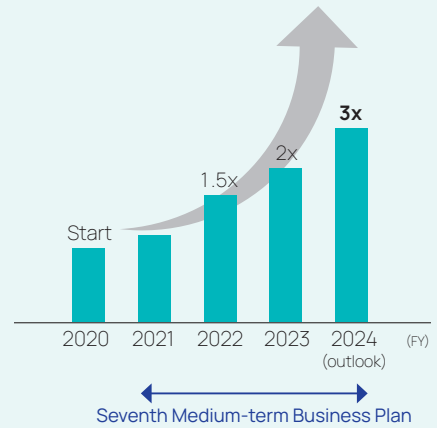
The JFE Group aims to expand its solution-based business model, where it provides the advanced manufacturing technologies, operational expertise, and research know-how it has developed over the years.

STRATEGY / **3**

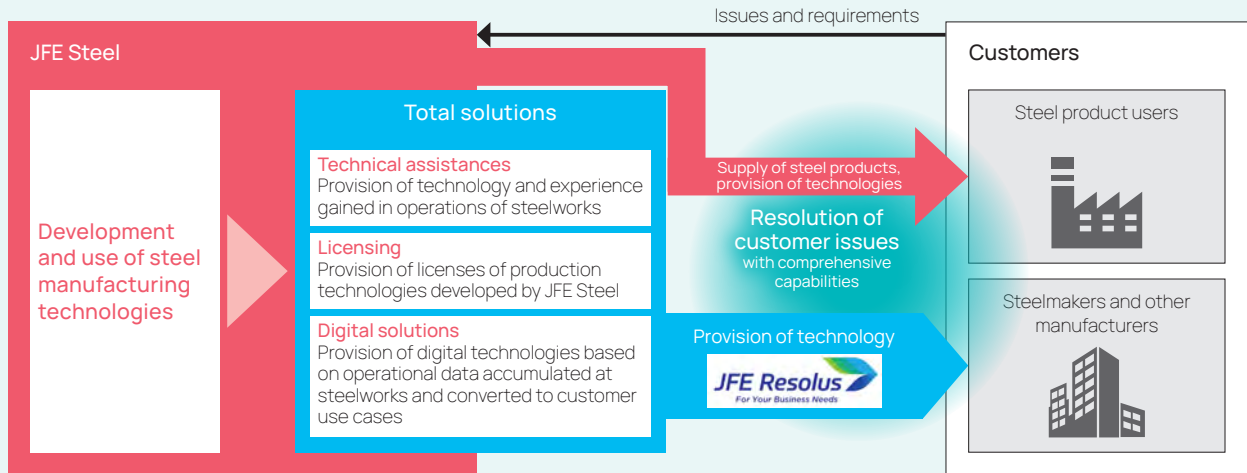
## Overview of JFE Steel's Solution Business

JFE Steel has developed world-class steel manufacturing technologies, which have traditionally been used solely in the production of its own steel products. Under the Seventh Medium-term Business Plan, however, the Company aims to expand the solution business and has shifted its strategy from keeping these technologies in-house to proactively offering them to external companies. JFE Steel now intends to provide total solutions that combine technical assistances, licensing, digital solutions to solve issues faced by customers in a broad range of manufacturing sectors, starting with the steel industry.

This has resulted in greater technological cooperation that had been previously limited to partner companies, leading to an increase in revenue. Compared to the fiscal 2020 level, revenue was 1.5 times higher in fiscal 2022 and 2.0 times higher in fiscal 2023. JFE Steel plans to further expand its customer base in fiscal 2024, and expects revenue to reach 3.0 times the level in fiscal 2020. The Company will offer a wide range of solutions based on accurate understanding of customer needs, and aims to contribute to society while expanding revenue further.



## External disclosure and provision of technologies



## Message from the General Manager of the Technical Solution Department

JFE Steel's solution business aims to broadly offer the manufacturing and operations technologies it has developed through steelmaking, especially to customers in the manufacturing industry, as a part of contributing to the advancement of society. As a steelmaking engineer myself, I have dedicated many years to the production of high-grade steel and the advancement of manufacturing processes. This new initiative of offering these technologies and experiences to customers in a wide range of manufacturing sectors, including other companies in the steel industry, is a mission that encourages with a strong sense of purpose and fulfillment from maximizing the value of what we have built. The hallmark of our solutions lies in sharing with customers the challenges we have faced and overcome on our own, and we spare no effort in this endeavor. Our internal organization is a diverse mix of technical and administrative personnel, ranging from young members to seasoned veterans, all working together with an air of excitement. We are also actively collaborating with external partners. Looking ahead, we aim to grow the solution business into a core pillar of our operations, on par with the manufacture and sale of steel products.



**Momoki Kamo**  
General Manager, Technical Solution Department, JFE Steel Corporation



## Provision of Technologies to Overseas Partners

To support the acceleration and expansion of overseas business, a key initiative of the Seventh Medium-term Business Plan, the company continues to proactively provide technical assistances and manufacturing licenses to our partners.

For JSW Steel in India, the company has provided manufacturing technology for automotive steel sheets produced at its main steelworks, Vijayanagar Works, while also offering a broad range of technical support across various fields. In Vietnam, JFE Steel has partial ownership of Formosa Ha Tinh Steel Corporation, which was established by the Formosa Plastics Group, a comprehensive petrochemicals producer in Taiwan. JFE Steel helped Formosa Ha Tinh Steel launch operations of

its integrated steelworks, followed by ongoing assistance to improve operations, focusing on blast furnaces, steelmaking, and hot rolling processes.

Furthermore, the company has started to proactively offer new digital technology solutions to its overseas partners.



Formosa Ha Tinh Steel Corporation's integrated steelworks

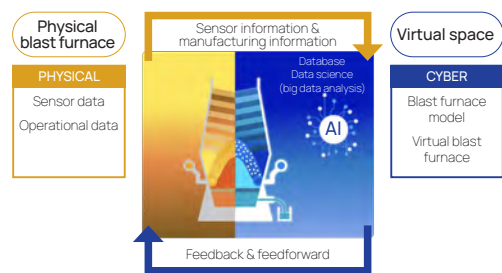
## Providing Solutions that Utilize Digital and Robotics Technologies

### Steel Technology

#### (1) Intelligent Blast Furnace Operation Support System (Blast Furnace CPS [Cyber-Physical System])

This system visualizes the condition of the blast furnace and warns when it predicts anomalies. It helps prevent major malfunctions in the blast furnace, ensures high-efficiency and stable operations, and contributes to the reduction of CO<sub>2</sub> emissions.

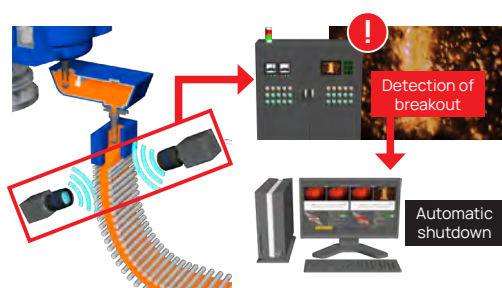
This system was installed at the No. 4 blast furnace of JSW Steel's Vijayanagar Works, and trial operations commenced at the outset of 2024.



#### (2) BO-Eye™ Breakout Detection System for Continuous Casting Machines

This system is designed to rapidly detect and minimize the impact of breakout incidents in continuous casting machines used in the steelmaking process, by constantly monitoring and analyzing images from cameras installed inside the machine, and automatically shutting down operations if a problem is detected.

The company will deliver the system to Formosa Ha Tinh Steel Corporation in 2024.

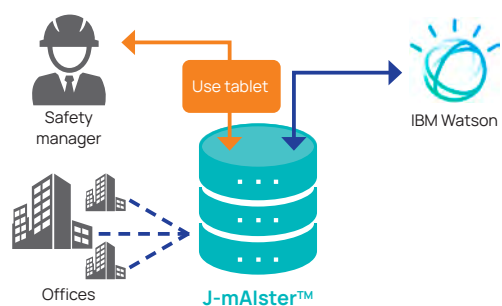


### Multi-Use Technologies

#### (1) Fault Recovery Support System J-mAlster™

J-mAlster™ system facilitates appropriate responses in the event of equipment failures by using AI to provide optimal data sources from among massive amounts of stored data encompassing the history of past failures, response logs, operating manuals, and similar sources. It is particularly well-suited to addressing the challenge of skill transfer at manufacturing sites where a new generation of workers is being trained.

Developed in collaboration with IBM Japan, Ltd., sales of this system were launched in September 2023, targeting a wide range of domestic and international customers. Through the widespread adoption of this system, the company aims to help its customers solve their problems.



### Concept of the Solution Business Brand JFE Resolus™

In May 2024, JFE Steel launched the new solution business brand JFE Resolus™ for the technologies it has been selling. The name JFE Resolus™ stands for JFE Steel, Revolution, Solution, and Synergy, expressing our commitment to meeting our customers' business needs through innovative solutions not seen before and creating synergies with customers.

For more details, please visit the JFE Steel Solution Business website: <https://www.jfe-steel.co.jp/en/products/solution/>



## Seventh Medium-term Business Plan: Strategy 4

# Intellectual Property Activities

The JFE Group strategically strengthens the intellectual property (IP) generated as a result of its advanced research and development to ensure sustainable growth. The Group also encourages international standardization and engages in other activities that further enhance its competitive edge.

STRATEGY / 4

### JFE Group's Approach to IP

Under the corporate vision of "contributing to society with the world's most innovative technology," the JFE Group engages in highly creative research and development. The advanced technologies and products that result from research and development are vital management resources of the Group and essential for maintaining its competitiveness and achieving sustainable growth. We are committed to appropriately

securing, strategically protecting, and utilizing these innovations as intellectual property.

#### Patent holdings (as of April 2024)

Domestic	Approx. 14,000 patents	International*	Approx. 14,000 patents
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\* Total number of registered patents in various countries

### Outcomes of JFE Steel's IP Activities

JFE Steel is focused on building an IP portfolio that supports its business strategy, emphasizing both the quantity and quality of its IP rights. JFE Steel holds more than 10,000 patents both domestically and internationally, and has strategically increased its patent applications in foreign countries to support the expansion of its overseas business. As a result, the number of new international patent (PCT) publications reached 418 in fiscal 2023, the highest among global steel companies. These efforts have also led to the expansion of overseas patent licensing.

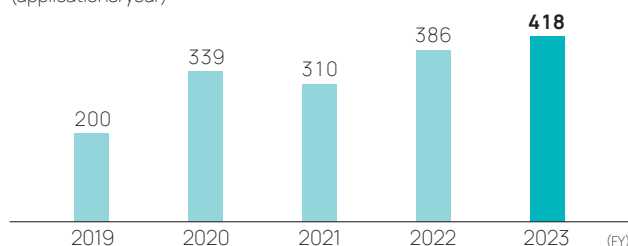
To encourage the creation of outstanding inventions, JFE Steel established the JFE Steel Patent Award system in 2018. The president recognizes more than 10 patent inventors every year.

The patents we generate through these activities are highly regarded externally as well. For instance, our patent for highly weather-resistant steel usable without paint near coastal areas was honored with the Fiscal 2024 Invention Award at the National Invention Award hosted by the Japan Institute of Invention and Innovation, marking the 10th award in 11 years.

Additionally, JFE Steel ranked first among steel companies in terms of the patent asset value per patent in Patent Asset Size Ranking 2023 for the steel, non-ferrous metals, and metal products sector, as announced by Patent Result Co., Ltd.

Moreover, alongside our patent initiatives, we are advancing brand strategies that enhance corporate value, such as launching the green steel JGreeX™, the solution business brand JFE Resolus™ for manufacturing technologies, and the EVI brand JFESCRUM™ in the building materials sector.

#### Number of new international patent (PCT) publications (applications/year)



#### Recent major external awards related to intellectual property and technology development

Awards	Invention	Organizers
FY2024 National Invention Award: Invention Award	Highly weather-resistant steel usable without paint near coastal areas	Japan Institute of Invention and Innovation
FY2023 Chugoku Region Invention Award: Awarded by the Minister of Education, Culture, Sports, Science and Technology	Steel sheet shape control technology in temper rolling	Japan Institute of Invention and Innovation
FY2023 Kanto Region Invention Award: Awarded by the Commissioner of the Japan Patent Office	Electrical steel sheets contributing to the enhancement of EV performance	Japan Institute of Invention and Innovation
FY2023 Okochi Memorial Technology Prize	Automation of blast furnace operations using cyber physical systems (CPS)	Okochi Memorial Foundation

## R&D and IP System to Accelerate Management Strategy

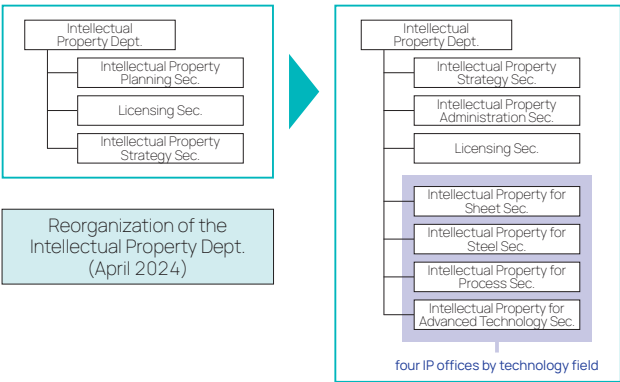
Intellectual property, which results from the development of technologies, is an important facet of our management strategy. At JFE Steel, the Intellectual Property Division plays a central role in setting up cross-departmental IP strategy meetings in various fields, ensuring a unified effort among business divisions, the R&D Division, and the Intellectual Property Division in formulating and executing technology strategies. In the R&D Division, the Steel Research Laboratory is creating a world-class technological development system that combines three fields. The first is the product development technology field, where new products, including high-value-added products, are developed. The second field is process technology, where new technologies are developed to improve productivity and reduce CO<sub>2</sub> emissions in manufacturing processes. The third field is Common Fundamental Technologies, such as for digital transformation (DX).

To promote strategic IP activities, the Intellectual Property Department is also responsible for developing IP talent, and underwent a reorganization in April 2024 to enhance functions. The IP Strategy Section was created to efficiently advance IP strategies across all fields, with a focus on critical areas such as the solution business and DX/ Green transformation initiatives. We expect the solution business to become a new business model for the JFE Group. In the solution business, we are advancing projects in collaboration with related departments, utilizing IP landscape techniques for seed development and

need exploration. Additionally, four new IP Section were established in different technology fields to efficiently plan and execute IP strategies tailored to each field.

This robust structure ensures that the business divisions, R&D Division, and Intellectual Property Division work in unison to efficiently advance concrete technology strategies in each key area of the management strategy. By properly managing our proprietary technologies, a source of strength, as intellectual property, we not only drive growth in existing businesses but also make progress expanding new business models, with these technologies acting as seeds for the solution business.

### Intellectual Property Dept. : Organization Chart



## Initiatives in International Rule-Making and Standardization

JFE Steel actively participates in the formation of international rules and standards that are essential to the future of the steel industry, and strongly encourages their adoption. In the industry (The Japan Iron and Steel Federation), JFE Steel has been recognized as one of the few accredited industrial standardization bodies that undertakes standardization activities. Recently, Japan has taken on the role of chair and secretariat country for the newly established Environmental Subcommittee under ISO/TC 17 (Steel). In the domestic committee, JFE Steel and other companies are involved in not only developing ISO standards but also exploring the potential of using standards as a market creation strategy with various companies. JFE Steel collaborates with the industry in these standardization

activities, playing a key role in the development of international standards such as ISO 20915,\* which outlines methodologies for calculating the life cycle environmental impact of steel products.

JFE Steel is also focused on differentiating its technology development and ensuring the appropriate protection of its IP rights. By linking standardization strategies and IP strategies with its management strategy from the R&D stage in collaboration with the Chief Standardization Officer (CSO), the Company aims to contribute to the steel industry while securing a competitive advantage within and outside the industry.

\* Please refer to Page 11 LCA (Life Cycle Assessment) of Steel.

Seventh Medium-term Business Plan: Strategy 5

# Promotion of DX Strategy

The JFE Group positions its DX strategy as one of the key strategies that will determine the success of the most significant transformation since its founding. Through this strategy, we are keen to unlock sustainable growth and enhance corporate value over the medium to long term.

STRATEGY / 5

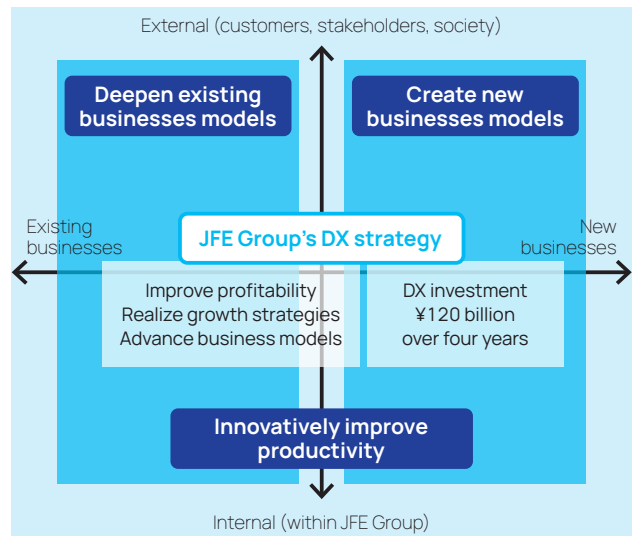
## JFE Group's DX Strategy

Using its world-class technologies, the JFE Group creates value that supports society with its constantly evolving know-how and technologies, along with volumes of operational data accumulated over years of diverse business activities. We are advancing the use of these intangible assets by integrating them with cutting-edge technologies, such as AI, IoT, and data science. Both JFE Steel and JFE Engineering are creating environments that enable more advanced data utilization by building their own data platforms in the cloud, facilitating the integration of business and operational data and interactions with new technologies. Building on this foundation, we aim to further enhance productivity, deepen existing businesses, and create new ones. This will help us improve profitability while providing products and services that address various issues, such as labor shortages and the realization of a carbon-neutral society.

Under the Seventh Medium-term Business Plan, we have budgeted ¥120 billion for investments over four years and are steadily moving forward with our investment plans. Additionally, each operating company is training DX talent, including through DX literacy courses to elevate employees' digital skills and prepare them for advanced applications. (DX Human Resource Development on page 65)

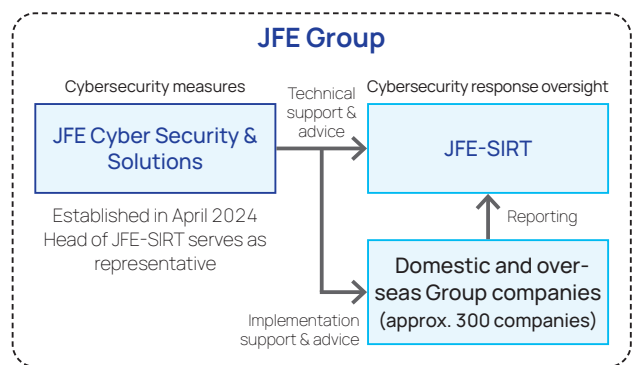
Furthermore, it is vital that we address increasingly sophisticated cyberattacks and the risk of information leaks, an extremely important management issue that cannot be overlooked, while we expand our business globally. The JFE Group established JFE-SIRT\* in 2016 and JFE Cyber Security & Solutions, Ltd. under JFE Steel in April 2024. By strengthening the security monitoring system and acquiring and training security experts, the JFE Group will further enhance the security of the entire supply chain, covering approximately 300 Group companies.

\* JFE-SIRT stands for JFE Security Integration and Response Team, an organization responsible for all measures and responses to computer security issues within the JFE Group.



Source: "DX Stock Selection 2024 Report," Secretariat of DX Survey, Ministry of Economy, Trade and Industry

### Role of JFE Cyber Security & Solutions, Ltd.



### Selected as DX Stock 2024

The JFE Group's DX strategy has been externally recognized, as JFE was the only company in the steel industry to be selected among the 25 companies that were honored with the DX Stock 2024 Award. The recipients of this award are jointly selected by the Ministry of Economy, Trade and Industry, the Tokyo Stock Exchange, and Information-technology Promotion Agency, Japan (IPA), from among approximately 3,800 listed companies. Since the launch of the Competitive IT Stock Award in 2015, the forerunner to the DX Stock Award, this marks the ninth time that JFE has been selected for this prestigious award.\*

\* In 2023, JFE was selected as a Noteworthy DX Company.

DX Stock (in Japanese only): [https://www.meti.go.jp/policy/it\\_policy/investment/keiei\\_meigara/dx\\_meigara.html](https://www.meti.go.jp/policy/it_policy/investment/keiei_meigara/dx_meigara.html)



DX銘柄2024  
Digital Transformation

## Initiatives of Operating Companies

### JFE Steel Acceleration of internal DX through organizational restructuring and promotion of solution business

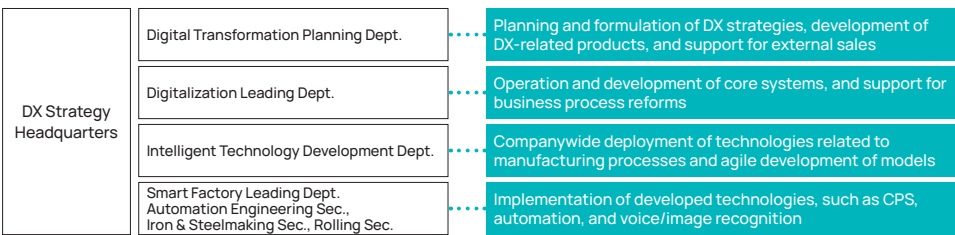
In April 2024, JFE Steel launched the DX Strategy Headquarters by integrating internal IT, control, and data science departments. This new headquarters is tasked with 1) advancing the formulation and execution of a consistent DX strategy, 2) increasing efficiencies in technology development, implementation, deployment, and maintenance, and 3) strongly promoting the solution business. As part of strengthening the manufacturing base, the JFE Group aims to fully implement cyber-physical systems (CPS) in all processes, and has successfully automated the operations of some blast furnaces. Notably, our automation of blast furnace operations using CPS was awarded the 70th Okochi Memorial Technology Prize.

Additionally, we independently developed a self-propelled cleaning robot capable of operating in harsh conditions and a steel pipe grinding robot, both of which help to improve labor productivity while eliminating the so-called "3Ks" (*kitanai, kiken, kitsui*—dirty, dangerous, demanding) in workplaces.

JFE Steel is making steady progress on the full transition of all core systems to the cloud environment, with some product lines already finished at the Sendai Works and West Japan Works. Plans call for the main systems to finish the transition in fiscal 2025.

For more details on our initiatives in the solution business, please refer to page 39.

#### New DX promotion structure

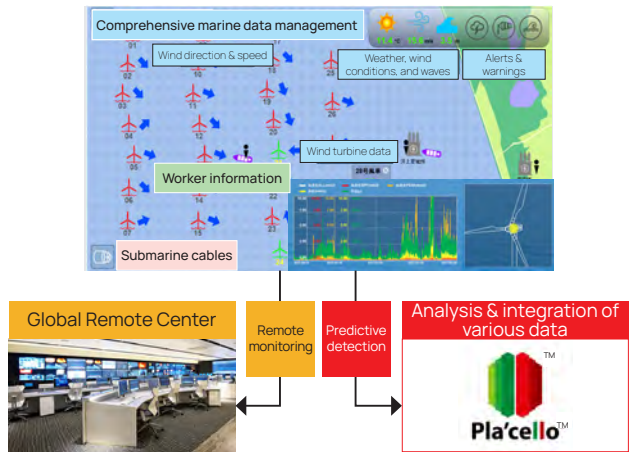


Cleaning robot for harsh conditions

### JFE Engineering Advancing DX that contributes to expansion of offshore wind power generation

JFE Engineering is leveraging the digital technologies developed through its extensive experience in plant construction and operation to expand into new business domains. In the operation and maintenance (O&M) field for offshore wind power generation, JFE Engineering has developed ASUNAG, an integrated management system that enables flexible management of various information essential for the reliable operation of offshore wind projects, such as substation facilities, weather conditions, and maritime data. In November 2023, the first ASUNAG system was delivered to the Nyuzen Offshore Wind Power Farm, operated by Nyuzen Marine Wind LLC. JFE Engineering aims to achieve labor-saving and efficiency improvements in the management and operation of power generation facilities by utilizing the technology and expertise accumulated through its operation of the Global Remote Center which monitors 88 locations domestically and internationally (as of the end of March 2024), as well as its big data analysis technology for predictive detection, and its proprietary data analysis platform Pla'cello™.

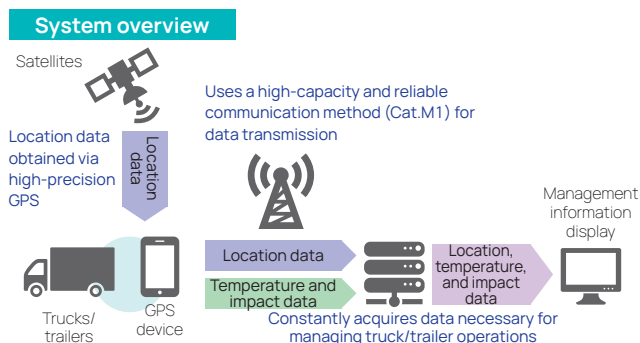
#### Diagram of ASUNAG integrated management system for offshore wind power



### JFE Shoji Logistics DX Solutions Increase logistics efficiency and visualize truck and trailer operations with GPS

At JFE Shoji, efforts are underway to enhance the efficiency of the logistics supply chain by leveraging DX. In spring 2024, JFE Shoji Electronics began a pilot test of a logistics tracking solution service that uses GPS devices. These GPS devices allow the visualization of information, such as location, temperature, and impacts, contributing to the optimization of truck and trailer operations while reducing the workload of drivers, in a bid to address the so-called 2024 Problem and improve transportation quality.

#### Diagram of logistics DX solution system



Seventh Medium-term Business Plan: **Strategy 6**

# Promotion of the JFE Group Environmental Vision for 2050 to Achieve Carbon Neutrality

STRATEGY / **6**

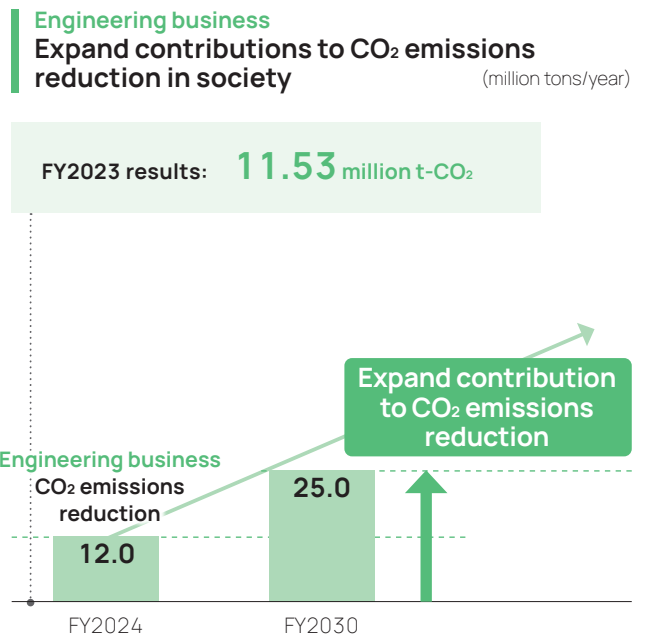
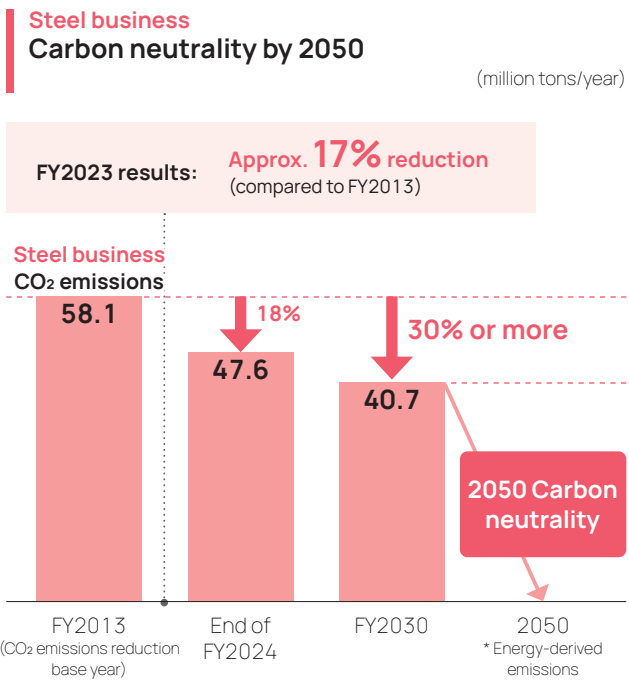
As part of its mission to be essential to society’s sustainable development and to create safe, comfortable lives for people everywhere, the JFE Group recognizes climate change as a critical management issue that must be addressed to achieve sustainable growth and enhance corporate value over the medium to long term. We are committed to developing various technologies and exploring all possibilities to achieve the ambitious goal of carbon neutrality by 2050 .

## Progress on the JFE Group Environmental Vision for 2050

In 2021, the JFE Group formulated the JFE Group Environmental Vision for 2050 to achieve carbon neutrality by 2050, positioning climate change initiatives as one of the most important issues in its Seventh Medium-term Business Plan. In formulating this vision, we will systematically work to resolve climate change problems while reflecting TCFD concepts in our management strategy.

In the steel business, we aim to reduce CO<sub>2</sub> emissions by at least 18% by the end of fiscal 2024, compared with the fiscal 2013 level. The JFE Group targets a reduction of more than 30% in CO<sub>2</sub> emissions by fiscal 2030, compared with the fiscal 2013 level. To explore all possibilities to achieve carbon neutrality by 2050, we will

take on the challenge of developing ultra-innovative technologies such as carbon-recycling blast furnaces developed with our unique technology while also adopting a multitrack approach for pursuing other technologies. In our engineering business, we will expand our contribution to the reduction of CO<sub>2</sub> emissions in society as a whole by expanding and advancing renewable power generation and carbon-recycling technologies, by supplying high-performance steel products in the steel business, and through other initiatives. Furthermore, we will accelerate commercialization of our offshore wind power business by applying the strengths of the Group.



## Expansion of JGreeX™ Supply

In the first half of fiscal 2023, JFE Steel commenced the supply of JGreeX™, a steel product that offers significantly reduced CO<sub>2</sub> emissions compared to conventional products. JGreeX™ has already been adopted by multiple shipping companies, and sales are

poised to expand. Reduction of CO<sub>2</sub> emissions by our technologies are allocated to any products upon the application of the mass balance approach with third-party certificate. By supplying the steel products as a green steel with high environmental value, JFE Steel

contributes to the reduction of customers' CO<sub>2</sub> emissions.

As reduction of CO<sub>2</sub> emissions across the whole supply chain gains momentum, JFE Steel aims to achieve further reduction by expanding adoption of various low-carbon technologies, energy-saving, and energy-efficiency technologies. JFE Steel will also contribute to the decarbonization of society by expanding the supply capacity of JGreeX™.

Demand for green steel is still in its early stages. JFE Steel

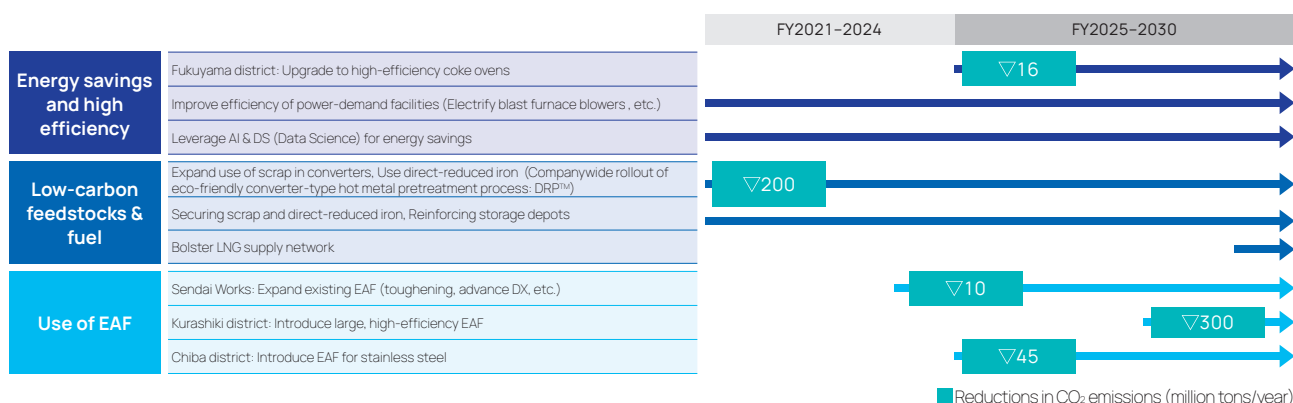
believes that institutional backing such as government policies is needed to raise awareness of the environmental value of green steel and to stimulate demand. JFE Steel is actively engaging with governments on this front.



## Transition to Low-Carbon Steel Process

JFE Steel is advancing multifaceted efforts, including the development of ultra-innovative technologies, toward achieving carbon neutrality by 2050. In the steel business, we have defined the period up to 2030 as the transition phase, and the period thereafter as the innovation phase. During the transition phase, JFE Steel is working on energy conservation and efficiency improvements in existing processes, as well as the utilization of electric arc furnace (EAF) technology. In anticipation of achieving our CO<sub>2</sub> emissions reduction target for fiscal 2030, we see the potential need for

investments and loans on the order of ¥1 trillion, and have authorized approximately ¥300 billion as of fiscal 2023. In fiscal 2024, we plan to make an investment decision about installing a high-efficiency large-scale EAF in the Kurashiki district of the West Japan Works, which will enable the production of high-quality steel previously achievable only in traditional blast furnace basic oxygen furnace (BF-BOF) processes. JFE Steel will continue to steadily authorize and execute the necessary investments and loans to achieve these reduction targets.



## Development of Ultra-Innovative Technologies

During the innovation phase, we will challenge ourselves with the research and development of ultra-innovative technologies such as carbon-recycling blast furnaces and hydrogen steelmaking (direct reduction), to achieve carbon neutrality by 2050. With the aim of achieving carbon neutrality by 2050, JFE Steel has formed a consortium with Nippon Steel Corporation, Kobe Steel, Ltd., and the Japan Research and Development Center for Metals that won a contract (project scale is approximately ¥573.7 billion\*<sup>1</sup>) from NEDO (New Energy and Industrial Technology Development Organization) for its Green Innovation Fund Project / Project to Hydrogen Utilization in Iron and Steelmaking Process (GREINS). In total, the four companies have received roughly ¥449.9 billion in assistance.\*<sup>2</sup> JFE Steel is constructing facilities at East Japan Works (Chiba district) for conducting demonstration tests related to these projects, such as the carbon-recycling blast furnace,

and has commenced some of the experiments. We aim to complete the development of these ultra-innovative technologies by the mid-2030s.

Furthermore, achieving carbon neutrality in steelmaking processes requires not only individual company efforts but also government policies and support. We are proactively proposing energy policies, including the necessity for a stable and large-scale supply of green electricity and the establishment of a hydrogen supply chain, at government-led study groups, subcommittees, and through industry organizations such as the Japan Iron and Steel Federation and Keidanren (Japan Business Federation). (Policy Engagement for Achieving Carbon Neutrality on page 67)

\*1 Source: NEDO's materials outlining the Project to Hydrogen Utilization in Iron and Steelmaking Process (GREINS) (May 24, 2024).

\*2 Includes incentive amounts. May change based on progress of project at future stage gates.

### Details of plan for demonstration tests

Carbon-recycling blast furnace (150 m <sup>3</sup> capacity)	Plan to start site construction in 2023, launch operations in April 2025, and complete demonstration tests by 2026
Direct reduction compact bench pilot furnace	Plan to start site construction in 2023, launch operations in the second half of 2024, and complete demonstration test by 2026
Pilot EAF (10 t pilot furnace)	Plan to start site construction in 2023, launch operations in the second half of 2024, and complete demonstration test by 2025

Promotion of the JFE Group Environmental Vision for 2050 to Achieve Carbon Neutrality

**Information Disclosure Based on the TCFD Recommendations**



In May 2019, JFE Holdings endorsed the recommendations outlined in the final report by the Task Force on Climate-related Financial Disclosures (TCFD). Based on this report, the Company discloses information related to the climate change problem.

(For details, please refer to the JFE Group Sustainability Report at <https://www.jfe-holdings.co.jp/en/sustainability/environment/climate/tcfd/>)

Climate-related risks and opportunities significantly affect the finance of companies in the medium to long term. The TCFD is a task force established by the Financial Stability Board (FSB) as requested at the G20, to reduce risks that could destabilize the financial market. The TCFD reviews methods of information disclosure that allows the financial market to appropriately evaluate climate-related risks and opportunities, and announces them as final recommendation reports.

**Governance**

The JFE Group's Standards of Conduct states that we will actively work to exist harmoniously with the global environment, as well as to raise living standards and advance societies. We acknowledge that activities to protect the global environment, such as reinforcement of environmental conservation and response to climate change issues, are absolutely essential to achieving a sustainable society.

In fiscal 2016, we designated "mitigating climate change" as our CSR materiality in order to pursue a steady plan-do-check-act (PDCA) cycle and appropriate management of our ongoing initiatives to reduce CO<sub>2</sub> emissions in iron and steel-making processes and to develop and provide environmentally friendly products. In 2021, we added an economic perspective to materiality, prioritized issues based on importance, and

The TCFD considers it important for investors and other parties to accurately grasp what effects climate-related risks and opportunities pose on the financial conditions of the investee before financial decision-making, based on which the TCFD recommends that information related to four core elements in organizational management—Governance, Strategy, Risk management, and Metrics and targets—should be disclosed.

launched new initiatives to address these important management issues.

The JFE Group Environmental Committee, established under the JFE Group Sustainability Council and chaired by the President of JFE Holdings, supervises and directs these initiatives across the Group by setting targets, assessing progress, and holding discussions to improve the Group's overall performance.

The Group Management Strategy Committee also deliberates topics that are vital to our business, such as climate change issues, and reports to the Board of Directors. The Board of Directors provides supervision through discussions on environmental issues such as climate change based on these reports.

**Examples of climate change-related issues reported to, deliberated, and decided at Board of Directors' meetings**

- Declaration of endorsement of the final TCFD recommendation report
- Information disclosure following the TCFD recommendations (scenario analysis, etc.)
- Formulation of the JFE Group Environmental Vision for 2050 in the Seventh Medium-term Business Plan
- Review reduction targets for CO<sub>2</sub> emissions by fiscal 2030
- Introduce executive compensation linked to climate change indicators

**Strategy**

The many risks and opportunities involved with climate change issues are integrated into the business strategies of the JFE Group in the following ways. The Group has created the Seventh Medium-term Business Plan to guide business and operations from fiscal 2021 to fiscal 2024. Initiatives to address climate change are positioned as a high priority issue for management within the context of achieving sustained growth over the medium to long term for the Group while increasing corporate value.

Moreover, the Company formulated the JFE Group Environmental Vision for 2050 to plot a path toward achieving carbon neutrality by 2050, with ensuring environmental and social sustainability as a key measure. While incorporating initiatives to address climate change in business strategies, the Company is systematically tackling climate change by reflecting

the concepts of the TCFD in business strategies. The JFE Group is disclosing scenario analysis and other information in accordance with the TCFD recommendations, and reflecting in its business strategies its assessments of identified risks and opportunities.

Under the JFE Group Environmental Vision for 2050, the Company engages in corporate activities based on the three strategies of reducing CO<sub>2</sub> emissions in the steel business, making greater contributions to CO<sub>2</sub> emissions reductions in society, and taking initiatives in the offshore wind power generation business. We are taking steps to reduce CO<sub>2</sub> emissions in the steelmaking process and also taking aggressive action to reduce burden on the environment by developing environmentally friendly products and process technologies, and providing solutions for recycling resources.



## TCFD content index

TCFD Disclosure Recommendations	Summary of TCFD Recommendations	JFE's Disclosure (relevant sections in the Sustainability Report )
<b>&lt;Governance &gt;</b> Disclose the organization's governance associated with climate-related risks and opportunities	a. Describe the Board of Directors' oversight of climate-related risks and opportunities	Corporate governance Risk management Climate change (Governance)
	b. Describe assessment of climate-related risks and opportunities, and management's role in company management	
<b>&lt;Strategy &gt;</b> Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's business, strategy, and financial planning (if such information is important)	a. Describe the climate-related risks and opportunities over the short, medium, and long term the organization has identified	Seventh Medium-term Business Plan (Major measures) JFE Group's value chain Climate change (JFE Group Environmental Vision for 2050) Climate change (JFE Group's climate change strategy) Scenario analysis based on the TCFD recommendations
	b. Describe the impact of climate-related risks and opportunities on the organization's business, strategy, and financial planning	
	c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C scenario	
<b>&lt;Risk management &gt;</b> Disclose the processes used by the organization to identify, assess, and manage climate-related risks	a. Describe the organization's processes for identifying and assessing climate-related risks	Risk management Environmental management Climate change (Risk management)
	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	
<b>&lt;Metrics and targets &gt;</b> Disclose the metrics and targets used to assess and manage climate-related risks and opportunities	a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management	Seventh Medium-term Business Plan (Major measures) Important management issues (materiality) Climate change (Metrics and targets)
	b. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 GHG emissions, and the related risks	
	c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	Climate change (Metrics and targets) Environmental data Important management issues (materiality) Climate change (JFE Group Environmental Vision for 2050) Climate change (Metrics and targets)

## Risk management

JFE Holdings is responsible for comprehensive risk management in accordance with its Basic Stance for Building an Internal Control System. The JFE Group Sustainability Council, chaired by the President of JFE Holdings, collects Groupwide information and enhances management for the purpose of reducing the frequency and impact of risks. The Corporate Officer responsible for risk works to identify potential risks associated with ESG risks such as climate change. If potential risks are identified, they are reviewed and assessed by the JFE Group Sustainability Council as necessary for further examination or the deployment of countermeasures.

The Board of Directors deliberates, decides, and receives reports on important matters related to ESG risks and sustainability, including climate change issues.

We identify and evaluate climate-related risks at the corporate level, taking into account scenario analysis based on the framework recommended by the TCFD. We select material factors impacting business and perform a closer analysis of their effects, then utilize this in formulating future business strategies, including the Seventh Medium-term Business Plan.

## Methods of monitoring risks relating to climate change

The JFE Group Sustainability Council, the Group Management Strategy Committee, and the Management Committee monitor risks that may impact our business. Monitoring is conducted through quarterly reports on climate change issues from each operating company deliberated by its environmental committee,

etc., to take suitable measures. The JFE Group Environmental Committee strengthens the collection and management of information relating to risks, to not only reduce the likelihood of risks occurring and their impact but also to strive to maximize opportunities.

## Metrics and targets

In May 2021, the JFE Group announced new targets for reducing CO<sub>2</sub> emissions, formulating the JFE Group Environmental Vision for 2050, which aims to achieve carbon neutrality by 2050. Initiatives to address climate change are also positioned as an issue of the highest priority in the Seventh Medium-term Business Plan. In February 2022, we raised the fiscal 2030 CO<sub>2</sub>

emissions reduction target for the steel business to 30% or more, compared with fiscal 2013. Moreover, JFE Steel's major domestic Group companies set CO<sub>2</sub> emissions reduction targets on a par with JFE Steel. Our business strategies include the initiatives of all Group companies within and outside Japan to tackle climate change.

Seventh Medium-term Business Plan: **Strategy 6**

Promotion of the JFE Group Environmental Vision for 2050 to Achieve Carbon Neutrality

**Scenario analysis**

While using scenario analysis to correctly understand the risks and opportunities related to climate, we evaluate the effects they have on current business strategies, and utilize them in establishing future strategies. Due to our business having the potential to be significantly affected by climate change, we analyze a wide range of scenarios, including the 1.5°C, 2°C, and 4°C scenarios. In fiscal 2023, we newly disclosed calculations of the impact on finances from risks and opportunities.

All scenarios are based on the scenarios announced by the

International Energy Agency (IEA). The analysis was performed under the assumption that carbon pricing would be introduced into major CO<sub>2</sub> generating countries in order to achieve the 2°C target. Under the 1.5°C scenario we added for reference, we need to accelerate the development and implementation of decarbonization technologies, but there are issues related to development costs, green hydrogen, and green electricity that need to be addressed. The JFE Group is promoting various measures to decarbonize ahead of schedule.

	Societal Changes	Opportunities/Risks		Expectations and Concerns of Stakeholders toward the JFE Group	Strategies and Initiatives	Financial Impact (2030 Estimates)*	
						Item	Amount/scale
<b>1.5°C / 2°C scenario</b> Important factor ① Decarbonization in steel production processes	Increasing in 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	<ul style="list-style-type: none"> <li>Implementation of conventional low-carbon technologies</li> <li>Introduction of large-scale EAF capable of producing high-quality steel</li> <li>Utilization of low-carbon direct-reduced iron</li> <li>Development and implementation of ultra-innovative technologies</li> <li>Studies of feasibility to commercialize CCUS</li> <li>Expansion of JGreeX™ supply capacity</li> <li>Lobbying to create demand for steel with environmental value</li> <li>Collaboration with other companies in the Japan Iron and Steel Federation to promote steel with environmental value</li> </ul>	Increase in sales of steel with added environmental value	+¥120 billion to +¥150 billion per year
			Transition risks	Increase in investment to introduce ultra-innovative technologies such as EAF	<ul style="list-style-type: none"> <li>Reinforcement of the earnings base</li> <li>Secure funding for investments and technology development</li> <li>Lobbying for government support</li> <li>Expansion of JGreeX™ sales</li> </ul>	Amount of GX-related investment for 2024-2030	Approx. -¥0.7 trillion
		Implementation of carbon pricing	Transition risks	Higher financial burden due to the mandatory implementation of carbon pricing. Further deepening/strengthening of targets due to environmental changes	<ul style="list-style-type: none"> <li>Establishment of reliable carbon-neutral technologies</li> <li>Policy engagement toward achieving carbon neutrality</li> </ul>	Increase in carbon pricing burden	Approx. -¥10 billion per 1% shortfall from emissions reduction target per year
<b>1.5°C / 2°C scenario</b> Important factor ② Increase in demand for the effective utilization of steel scraps	Increased attention on EAF process as low CO <sub>2</sub> emission	Higher competition and prices for cold iron sources (scrap/direct-reduced iron)	Transition risks	Increase in the cost of purchasing cold iron sources	<ul style="list-style-type: none"> <li>Collaboration with customers and users for scrap collection</li> <li>Establishment of technologies for use of low-grade and difficult-to-use scrap</li> <li>Participation in direct-reduced iron projects</li> <li>Expansion of scrap handling volume</li> <li>Reduction of manufacturing costs</li> <li>Pass higher costs onto steel prices</li> </ul>	Increase in purchase cost for cold iron sources	Up to about ¥50 billion per year
			Transition risks	Increase in manufacturing costs due to higher electricity usage (increase in electricity consumption, reduction in co-product gas generation)	<ul style="list-style-type: none"> <li>Reduction of manufacturing costs</li> <li>Pass higher costs onto steel prices</li> <li>Lobbying for stable electricity supply and prices</li> </ul>	Increase in manufacturing costs due to process transition (equivalent to 0.5 nuclear power plants' worth of additional electricity usage)	Undisclosed due to relationship with management strategy
<b>1.5°C / 2°C scenario</b> Important factor ③ 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	<ul style="list-style-type: none"> <li>Expansion of production facilities for electrical steel sheets</li> <li>Establishment of a global processing and distribution system for electrical steel sheets</li> </ul>	Increase in sales of electrical steel sheets	Undisclosed due to relationship with management strategy
			Opportunities	Increase in sales volume of high-strength steel to improve vehicle crush safety	Increase in production capacity for ultra-high-strength steel sheets	Increase in sales due to expanded orders for high-strength steel sheets	
			Transition risks	Decrease in steel sales volume due to decline in internal combustion engines and shift to other materials through use of multi-materials	Development of high-performance products	Decrease in sales of conventional automotive steel sheets	Small impact
<b>1.5°C / 2°C scenario</b> Important factor ④ Increase in demand for solutions promoting decarbonization	Transition to decarbonized society	Expansion of business opportunities in decarbonization and solution business	Opportunities	Expansion of renewable energy-related business	Expansion of integrated construction and operation businesses for renewable energy plants (biomass, geothermal, solar, offshore wind, etc.)	Sales in carbon neutrality-related fields in the engineering business	Approx. ¥200 billion per year
			Opportunities	Expansion of low-carbon business (eco-solutions) 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 solution business	Currently being calculated
<b>4°C scenario</b> Important factor ⑤ Unstable procurement of raw materials due to increased frequency in climate disasters	Intensifying climate disasters alongside global warming	Instability in raw material procurement	Physical risks	Reduction in sales due to decreases in production Increase in raw material costs	<ul style="list-style-type: none"> <li>Alternative procurement, diversification of raw material sources, and stockpiling</li> <li>Acquisition of raw material interests</li> </ul>	Decrease in sales of steel due to depletion of raw material inventories	Approx. -¥30 billion per year per 1% decrease in annual sales volume
<b>4°C scenario</b> Important factor ⑥ Damages to business bases due to climate disasters	Intensifying climate disasters alongside global warming	Occurrence of typhoon, heavy rain, and drought damage at manufacturing sites	Physical risks	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
<b>4°C scenario</b> Important factor ⑦ National resilience	Intensifying climate disasters alongside global warming	Strengthening of infrastructure and disaster countermeasures	Opportunities	Increase in orders due to investments to make infrastructure more resilient and last longer	<ul style="list-style-type: none"> <li>Strengthening of businesses to meet needs for improving resilience and longevity of domestic and international infrastructure</li> <li>Increase in sales of infrastructure-related steel products</li> </ul>	Increase in sales in infrastructure field of the engineering business	Currently difficult to estimate

\* Financial impact is solely an estimated figure based on scenario analysis and does not match with actual business performance.



Seventh Medium-term Business Plan: **Strategy 6**

Advancing the commercialization of the offshore wind power business

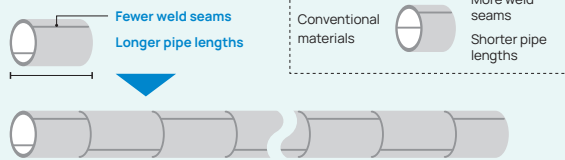
**JFE Steel**

**Supporting Tomorrow's Green Energy with J-TerraPlate™ large and heavy Steel Plates**

As offshore wind turbines grow in size to reduce power generation costs and increase output, the foundation structures that support these turbines are also becoming larger. To meet this need, JFE Steel is enhancing its production system for steel plates used in monopiles, a key component of foundation structures for offshore wind turbines. The startup of the seventh continuous casting machine at the West Japan Works (Kurashiki district) in 2021 has enabled the production of larger and heavier semi-finished products for steel plates than before. In addition, JFE is investing in steel plate mills and peripheral facilities at both the West Japan Works (Kurashiki district) and East Japan Works (Keihin district), and is commencing mass production in both districts of high-quality large and heavy steel plates, branded as J-TerraPlate™, for offshore wind power applications.

There are only a few steelmakers globally that can produce and supply large quantities of heavy steel plates, and JFE Steel's plates, weighing up to 37 tons each, are among the largest in Asia. J-TerraPlate™ helps to reduce welding volume and assembly work during monopile fabrication. The advantages of J-TerraPlate™ have been recognized by offshore wind power operators and monopile manufacturers, and it has already been used in overseas offshore wind power projects. JFE Steel has also received numerous inquiries from companies both domestic and international. Going forward, JFE Steel will continue to encourage the adoption of offshore wind power, an important source of green energy, by supplying J-TerraPlate™ worldwide.

**J-TerraPlate™**



- Less welding volume
  - Fewer assembly man-hours
  - Shorter production lead times
  - Higher production volumes
- ➔ **Lower manufacturing costs**
- ➔ **Promotion of offshore wind power**

J-TerraPlate™ large and heavy steel plate helps to increase the efficiency of monopile fabrication

**JFE Engineering**

**Aiming to Be a Leading Company in Offshore Wind Power Foundation Manufacturing**

Offshore wind power is a promising source of green energy. In Japan, public bidding on offshore wind power projects began in 2020 and have ramped up since then, based on the Act on Promoting the Utilization of Sea Areas for the Development of Marine Renewable Energy Power Generation Facilities. The foundations of offshore wind turbines can be broadly classified into fixed-bottom and floating types, with fixed-bottom monopile foundations being the most economical option for shallow water areas.

JFE Engineering constructed Japan's first monopile manufacturing plant, the Kasaoka Monopile Factory, at JFE Steel's West Japan Works (Fukuyama district) in Kasaoka City, Okayama Prefecture, which began operations in April 2024. Utilizing the large and heavy steel plates supplied by the West Japan Works (Kurashiki district), the Kasaoka Monopile Factory has been able to reduce welding volume and improve assembly efficiency, enabling the competitive fabrication of monopiles. The factory has the capacity to produce approximately 100,000 tons of monopiles annually, equivalent to around 50 offshore wind turbines (15 MW class). Our aim is to secure a 50% market share in Japan.

Additionally, the factory can manufacture transition pieces, which connect monopiles to wind turbine towers, as well as large steel pipes used in the columns of floating foundations. This has allowed JFE Steel to establish a position as a versatile manufacturer capable of supporting a wide range of foundation structures. We are committed to contributing to Japan's carbon neutrality by supplying these essential components of offshore wind power installations.



**Materials production**

- High-quality large and heavy steel plates

**Supply chain**

- Supply of components for foundation structures
- Supply of materials and equipment for the O&M business

**Foundation manufacturing**

- Fixed-bottom foundations (monopile and jacket types)
- Floating foundations (semi-submersible type)

**JFE Shoji**

**Contributing to the Offshore Wind Power Industry through Supply Chain Development**

Backed by its long-standing business expertise in steel materials, processed products, raw materials, and equipment sales, JFE Shoji collaborates with both domestic and overseas manufacturers to supply parts and materials for foundation structures, such as steel for offshore wind power and to supply equipment, parts, and materials for O&M.

JFE Shoji proposes optimal supply chains by aiming to match the needs of regional power producers and other companies to the technologies of the JFE Group and JFE Shoji's suppliers as potential suppliers for the offshore wind industry.

JFE Shoji contributes to the development of both the offshore wind power industry and regional communities through the creation of robust supply chains.

Japan Marine United

**Secured “Green Innovation Fund\*\*” (GIF) to Build Floating Offshore Wind Demos**

Offshore wind is expected to become a major power source of renewable energy due to its potential for large-scale generation capacity, cost reductions, and positive contributions to the local economy. In particular, the use of floating offshore wind is expected to grow rapidly as its power generation facilities can be installed in a wider range of sea areas, allowing for cost reductions at an early stage.

The Southern Akita Floating Offshore Wind Demonstration Project Aimed at Overseas Expansion via Cost Reductions (the Project), proposed by a consortium in which Japan Marine United and JFE Engineering participate, has been awarded under the GIF project.

The Project is planned to deploy two units of over 15 MW wind turbine on-site at approximately 400 meters deep off the southern coast of Akita Prefecture, with commercial operation scheduled to start in autumn 2029.

Japan Marine United will advance cost reduction of floating offshore wind working with the consortium members by utilizing optimized design technology for floating foundations, integrated load analysis technology for wind turbines and floating foundations, in-water joint technology for split-building floating foundations, hybrid mooring systems combining steel chains and fiber ropes, and application of digital twin technology to floating foundations, etc., which aims to accelerate the adoption of floating offshore wind as well as help to the development of domestic industry, including the establishment of domestic supply chains and human resource development, thus contributing to achieving carbon neutrality.

\*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.

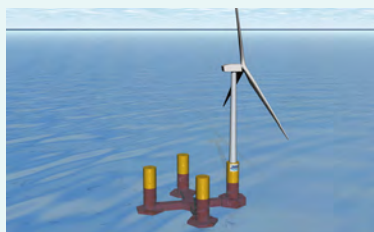


Image of semi-submersible floating foundation developed by Japan Marine United for the Southern Akita Offshore Project



Jack-Up Vessel built by Japan Marine United

JFE Engineering

**Entering the Offshore Wind Power O&M Business by Leveraging Experience and Group Resources**

For over 25 years, since 1996, JFE Engineering has been involved in engineering, procurement, and construction (EPC), equipment supply, and maintenance of onshore wind power plants (25 sites/131 turbines). By utilizing to its fullest this extensive experience and knowledge in onshore wind power and by maximizing the technologies of JFE Group companies, JFE Engineering is advancing into operation and maintenance (O&M) business for offshore wind power.

In October 2023, we began a 20-year O&M business for the offshore wind power facilities located off the coast of Nyuzen, Toyama Prefecture. For this business, we adopted the first-ever remote integrated management system for offshore wind power, and this will enable scheduled preventive maintenance, predictive detection through sensors and data analysis and management, and fault diagnosis.

Offshore wind power facility maintenance is much more complicated than for onshore wind power, such as accessing the turbines, operating heavy machinery, and conducting underwater inspections. However, we are steadily accumulating O&M experience at Nyuzen. By using drones and remotely operated vehicles (ROVs), we have increased the work efficiency of personnel, and our maintenance equipment enables repairs and maintenance of equipment in need of attention. By establishing proprietary technologies such as these, JFE Engineering aims to acquire O&M businesses for more domestic offshore wind power projects.



Photo provided by Venti Japan Inc.

**Installation**

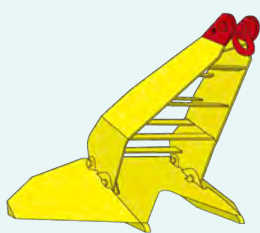
- Construction of work vessels (Jack-Up Vessels)
- Installation of cable landing pipes

**O&M**

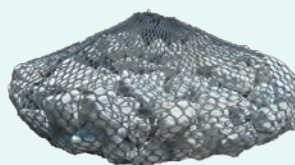
- Remote monitoring and operation technologies
- Offshore support vessels



Taiwan Steel plates for pin piles



Mooring components for floating foundations



Scour protection materials



Remote cameras for operations monitoring

# Business Strategies

## Steel Business

## JFE Steel Corporation



### Transforming carbon neutrality into a growth opportunity and advancing long-term management strategies

JFE Holdings recognizes that carbon neutrality, an issue of the highest priority, is a significant growth opportunity and is committed to developing ultra-innovative technologies ahead of the competition. By shifting our focus from quantity to quality as outlined in the Seventh Medium-term Business Plan, we aim to establish a stable profit foundation and implement long-term management strategies to achieve sustainable growth.

### Masayuki Hirose

President and CEO  
JFE Steel Corporation

### Key measures in the Seventh Medium-term Business Plan and fiscal 2024 earnings targets

1. Transition to a lean, robust business structure by shifting focus from quantity to quality
2. Pursue innovation aimed at achieving carbon neutrality
3. Use digital technologies to strengthen production bases and achieve new growth
4. Expand and accelerate overseas business via solutions based on knowledge, skills, and data

#### Per-ton profit\*

**¥10,000** ton

(Target segment profit of ¥230.0 billion)

\* Segment profit / unconsolidated sales volume in tons

#### Strengths

- World-class technologies that reduce environmental load and contribute to carbon neutrality
- World-class production technologies for high-value-added products
- Abundant world-leading technologies and operational/research know-how
- Cutting-edge AI, IoT, and data science technologies to evolve the company through DX
- Extensive customer base built up over the decades, alliances with steelmakers around the world

#### Threats and risks

- Long-term decline in domestic steel demand
- Local production for local consumption of steel in emerging countries
- Anti-globalization movement around the world
- Uncertain outlook for global economy due to heightened geopolitical risks
- Rising commodity prices, including energy and logistics costs
- Rapid changes in foreign exchange rates
- Increase in exports of steel products due to China's economic slump centered on its real estate sector

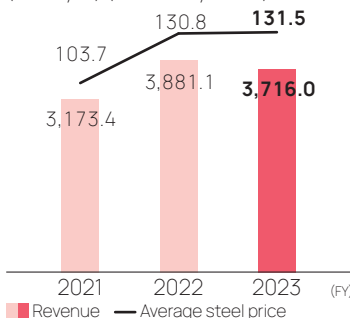
#### Opportunities

- Stronger demand for eco-products and solutions that help reduce CO<sub>2</sub> emissions
- Increasing demand for high-grade steel due to the shift to lighter and EVs and greater safety and durability
- Increasing demand for steel materials due to medium- and long-term growth in emerging countries, and needs for operational and environmental technical assistance from local steelmakers
- Increasing demand for infrastructure for natural disaster prevention and replacement to make Japan more resilient
- Top global runner in carbon-free manufacturing processes

### Fiscal 2023 results

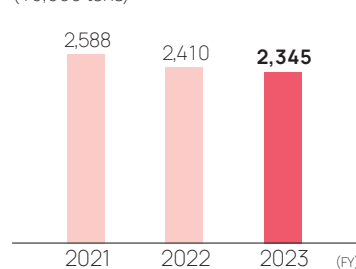
#### Revenue/Average steel price

(billion yen) (thousand yen/ton)



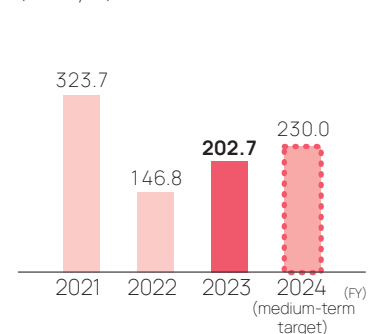
#### Non-consolidated crude steel output

(10,000 tons)



#### Segment profit

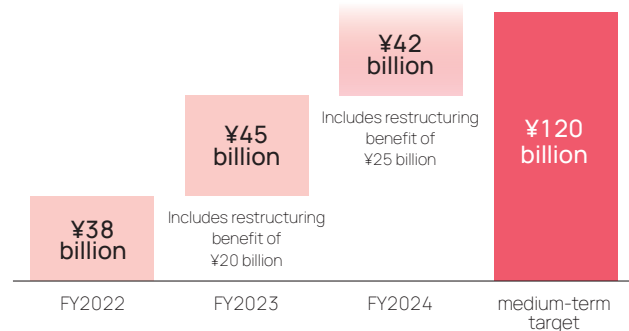
(billion yen)



## Initiatives in Fiscal 2023

In Japan, despite a modest recovery in the automobile sector, demand remained low due to projects being postponed amid labor shortages in the civil engineering and construction sectors, the so-called 2024 Problem. Overseas, the sales environment was challenging, with weak domestic demand in China due to a slump in its real estate sector and a deteriorating supply-demand balance in global markets caused by higher exports from China. Despite these challenges, JFE Steel worked to expand earnings by restructuring production systems through the completion of structural reforms, reducing costs, increasing selling prices, and shifting to high-value-added products. As a result of these initiatives, a segment profit of ¥202.7 billion was recorded, an increase from the previous fiscal year, underscoring a successful transition to a structure able to secure stable earnings, unaffected by external factors such as intensified competition in foreign markets. Additionally, as a part of efforts to realize a carbon-neutral society, JFE Steel launched sales of JGreeX™, a green steel product that features significantly reduced CO<sub>2</sub> emissions in the manufacturing process.

### Progress on cost reductions (structural reforms + operational improvements)



## Medium- to Long-term Strategy and Future Initiatives

### ● Initiatives toward Carbon Neutrality

In line with the goal of achieving carbon neutrality by 2050, in the Chiba District, JFE Steel plans to commence operations of a small-scale prototype direct-reduction ironmaking furnace and a small-scale prototype electric arc furnace in fiscal 2024, as well as a prototype carbon recycling blast furnace in fiscal 2025 as a part of demonstration testing facilities for the Hydrogen Utilization in Iron and Steelmaking Processes Project, which has been selected as a NEDO Green Innovation Fund Project. JGreeX™, a green steel product that features significantly reduced CO<sub>2</sub> emissions in the manufacturing process, was initially adopted in the fiscal year that deliveries commenced (fiscal 2023) for large ship and building construction projects, as well as in the electric power sector. In fiscal 2024, we aim to expand sales of JGreeX™ across all product lines and sectors to further integrate the environmental value of green steel into society



Dry bulk carrier constructed with only JGreeX™ green steel

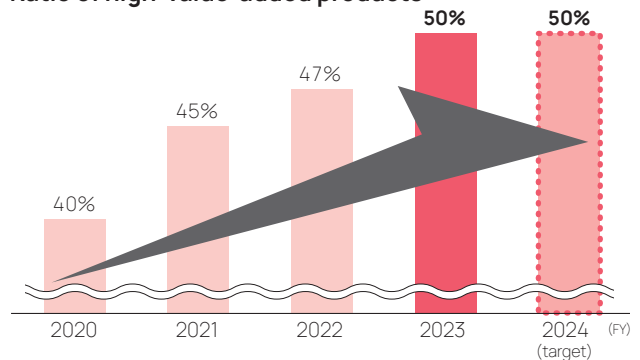
### ● Shift from Quantity to Quality

Anticipating a global increase in demand for high-performance electrical steel sheets driven by the electrification of automobiles, JFE Steel has decided to invest in expanding production capacity for top-grade non-oriented electrical steel sheets for the main drive motors of electric vehicles (EVs) at the West Japan Works (Kurashiki district). The first phase of this expansion was completed in the first half of 2024, roughly doubling production capacity compared to before.

Furthermore, a second expansion phase is being planned to roughly triple production capacity compared to before by the end of fiscal 2026, ensuring that we can tap into growing demand. Additionally, we are focusing on the new development of ultra-high strength steel for automobiles, while expanding sales of J-TerraPlate™, a large and heavy steel plate for wind power generation, as eco-products and high-value-added products that contribute to carbon neutrality. Including the boosts from initiatives to increase selling prices and to reduce fixed costs through structural

reforms, but excluding inventory valuation differences, we expect profit per ton to reach ¥10,000 in fiscal 2024, in line with our medium-term target, as we continue to shift our focus from quantity to quality.

### Ratio of high-value-added products



### ● Overseas Strategy

Our overseas business strategy focuses on leveraging our advanced manufacturing technologies, operational expertise, and research know-how to drive business expansion and integration into growth markets. In India, where demand for electricity is likely to increase, JFE Steel established a joint venture with JSW Steel to manufacture and sell grain-oriented electrical steel sheets, with full-scale production slated to begin in fiscal 2027. Additionally, in the United Arab Emirates (UAE), we are exploring the development of a supply chain for low-carbon direct reduced iron. To support the decarbonization movement, we recognize the need for securing high-quality coking coal and will continue to explore investments in coking coal mines to ensure a stable long-term supply.

### ● DX and Solution Business

We are strengthening our manufacturing foundation and executing new growth strategies with digital technologies. As part of our structural reforms with IT, we are accelerating a refresh of core Companywide systems, aiming to complete full cloud migration by fiscal 2025, two years ahead of the initial schedule, to enhance productivity and competitiveness. Furthermore, we are launching JFEResolus™ as a solutions business that applies our wealth of technology, know-how, and data accumulated in the steel business to other sectors. We have also established a cybersecurity company to enhance responsiveness to the increasing risks posed by cyberattacks in recent years.

# TOPICS

## Growth Strategy Implementation Framework

### Establishment of Strategy Headquarters

In our long-term vision, we have positioned the GX strategy, DX strategy, and human resources strategy as our three key strategies. In fiscal 2024, we established a new strategy headquarters for each. The GX Strategy Headquarters aims to steadily reduce CO<sub>2</sub> emissions by switching to a unified management structure with double the human resources for

related operations in order to boost work efficiency. The DX Strategy Headquarters was established to formulate medium- to long-term strategies across the entire digital domain. Finally, the Human Resources Strategy Headquarters aims to secure and develop the talent that will drive growth, invest heavily in human capital, and foster a new corporate culture.

#### GX strategy

- Accelerate the development of ultra-innovative technologies and encourage early social implementation
- Create demand for and expand sales of high-quality green steel by enhancing understanding of its environmental value
- Build CCUS and green infrastructure through collaboration between industrial complexes and companies
- Propose government policies and communicate information to stakeholders to realize a carbon-free society

#### DX strategy

- Fundamentally reform business processes by leveraging digital technologies
- Realize intelligent steelworks through Companywide CPS integration, as well as automation and remote operations
- Develop technologies to promote and accelerate DX and support external sales
- Cultivate DX talent

#### Human resources strategy

- Synchronize management strategies with human resources strategies
- Secure and develop high-quality talent that will drive growth
- Enhance job satisfaction and foster a new corporate culture where both the Company and employees grow together
- Promote DE&I to create an environment where diverse talent can thrive

## ReFuture PROJECT

### A Reform Project that Aims to Enhance Job Satisfaction and Foster Mutual Growth of the Company and Employees

Recognizing that enhancing job satisfaction is an important management issue, we define job satisfaction as a combination of ease of working and sense of satisfaction from work. To improve these aspects of work, we have commenced a full-scale effort to implement various measures aimed at improving the work environment, reforming business processes, revising the personnel wage system, and transforming the corporate culture. Additionally, we have formulated a Purpose (the Company's reason for existence) and Values (the values we prioritize) as expressions of our vision for the future and clarifications of how we contribute to society, which will shape our growth strategies and act as a guide for

employees to find value and fulfillment in their work. These aspects of our corporate culture will be reflected in the creation of a vision for the Eighth Medium-term Business Plan.



Dialogue between management and employees

We create opportunities for two-way communication, where management can clearly convey the Company's future direction and what is expected of employees, while employees can share with management their concerns and issues related to the Company and their work.

## ReFuture PROJECT

### JFE Steel Purpose

## Dream for your Future, Steel takes you Further.

For 4,000 years, people has been transforming iron into various products, fulfilling dreams, and shaping civilizations.

Yet, the full potential of iron remains unrealized, awaiting future exploration and development.

JFE Steel is committed to delivering pioneering technology and superior steel that together empower society and meet the evolving needs of the global market. By partnering with industry leaders, we are determined to drive sustainable development, improve quality of life, and revolutionize industrial processes.

We will lead the way in technological innovation with unwavering dedication and a focus on delivering exceptional results.



## Engineering Business

## JFE Engineering Corporation



### Becoming an engineering company that contributes to the achievement of the SDGs with the mission of foundation of life

When formulating a medium- to long-term strategy targeting the year 2030, JFE Engineering came up with its purpose called “foundation of life, Just for the Earth.” We strongly back people’s lives and the creation of a safe society for current and future generations. Driven by a mission of “Just for the Earth,” the entire company is working diligently to contribute to the achievement of the SDGs and achieve its targets in the Seventh Medium-term Business Plan.

### Kazuyoshi Fukuda

President and CEO  
JFE Engineering Corporation

### Key measures in the Seventh Medium-term Business Plan and fiscal 2024 earnings targets

#### 1. Enhance medium- to long-term priority areas as growth fields

- Waste to resources
- Carbon neutrality
- Combined utility services
- Infrastructure

#### 2. Expand overseas operations by developing business in tune with local needs

#### 3. Advance DX projects for all engineering work

#### Revenue

¥650.0 billion

#### Segment profit

¥35.0 billion

#### Strengths

- Track record and technological capabilities in the broader infrastructure business
- Track record and technological prowess in the environmental, recycling, and renewable energy fields
- Stable earnings foundation thanks to expansion in the O&M business
- Integrated provision of utilities (water, electricity, gas, etc.)

#### Threats and risks

- Contraction in domestic public works projects in line with government aims and policies
- Increase in construction costs due to changes in prices for equipment and materials
- Decline in EPC projects due to fall in private-sector capital investment
- Uncertainties in the global economy caused by geopolitical risks

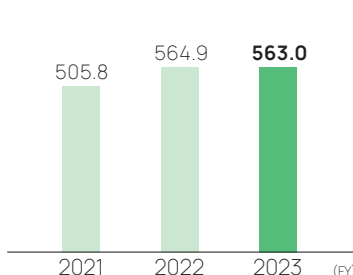
#### Opportunities

- Greater social expectations for SDGs achievement
- Stronger demand for infrastructure upgrades and service life extension
- Changes in social structure with privatization of public services
- Growing needs for renewable energy

### Fiscal 2023 results

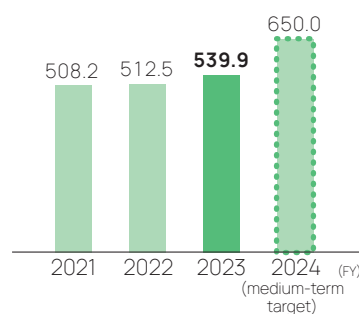
#### Orders received

(billion yen)



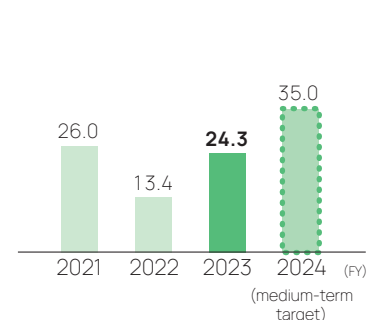
#### Revenue

(billion yen)



#### Segment profit

(billion yen)



## Strategy to Create Value

### Business Strategies

#### Initiatives in Fiscal 2023

JFE Engineering has been expanding into the operation and maintenance (O&M) business that supports the foundation of life, including public-private partnership (PPP) projects, power generation and electric power businesses, and recycling operations, in addition to its traditional engineering, procurement, and construction (EPC) business.

In the EPC business, as a "creation" business of the foundation of life, JFE Engineering achieved record-high revenue for two consecutive fiscal years. We successfully executed large-scale projects in Japan and abroad centered on core infrastructure areas, such as environmental plants, pipelines, and bridges, our areas of excellence.

In O&M businesses, JFE Engineering is addressing future issues, such as labor shortages and the passing down of technical expertise, while expanding and advancing remote monitoring bases with DX technology in O&M and related businesses with a focus on environmental plants.

Earnings have become more stable along with a higher weighting of O&M businesses, including DBO\* projects for environmental plants and new local electric power businesses. In the combined utility services field, we have installed gas cogeneration systems in the production plants of pharmaceuticals companies to provide heat and power. JFE Engineering has also won contracts in the energy services business for electric power interchange across 11 sites in Japan. In the waste to resource field, Group company J&T Recycling in the recycling business has decided to build one of the

largest plastic recycling facilities in the Tokyo metropolitan area, located along the Kawasaki coastal area.

As part of our efforts to achieve carbon neutrality, we are conducting demonstration tests of CO<sub>2</sub> separation and capture technologies at various plants, as well as our waste chemical recycling technologies, in addition to ongoing renewable energy EPC and business management.

Overseas, we have contributed to the development of rapidly growing countries and regions by commencing operations of waste-to-energy plants in Vietnam and Malaysia, securing orders for chemical plants in Singapore, and constructing viaducts, railway bridges, and other critical infrastructure in countries across Africa and Asia.

In Japan, we completed the integration of water engineering businesses with Tsukishima Holdings, and commenced operations at Tsukishima JFE Aqua Solutions. This business integration combines and leverages the technologies, services, and business expertise of both companies, as we aim to expand business as a leading company in the domestic water and sewage sector.

Leveraging our accumulated technologies and know-how, we have expanded and advanced business domains related to "creation," "responsibility," and "connections" to the future as the foundation of life.

\* DBO: A method where design, build, and operation processes are commissioned as a single package.

#### Medium- to Long-term Strategy and Future Initiatives

JFE Engineering has formulated a medium- to long-term vision with 2030 as the target year. To realize our vision for a circular economy, we are strengthening initiatives in five key areas: waste to resources, combined utility services, core infrastructure, carbon neutral (i.e., contributing to CO<sub>2</sub> reductions), and DX projects (i.e., the technological foundation that supports the other initiatives).

In **the waste to resources field**, with the intention of creating a business model centered on thoroughly using waste, we will build a rock-solid earnings foundation by steadily expanding assets over the long term and tapping into demand for replacing aging waste-to-energy power facilities. Overseas, we are accelerating the development of O&M businesses, in addition to EPC projects. In the recycling business, we have identified three core businesses with strong social needs: food recycling, plastic recycling, and waste incineration / power generation. Through aggressive investment, we will expand our bases nationwide.

In **the carbon neutrality field**, in addition to solar and biomass power generation that we have focused on, we are strengthening our presence in the fields of offshore wind power and geothermal power generation. In the offshore wind power field, we constructed the Kasaoka Monopile Factory as Japan's first plant to manufacture

seabed foundational structures for wind power plants, putting the finishing touches on our production system. JFE Engineering is also accelerating the development of carbon-neutral technology by leveraging its accumulated know-how in incineration technology.

In **the combined utility services field**, as an O&M business that is a "responsible" foundation of life, JFE Engineering comprehensively provides utility services (water, electricity, and gas) to regions, including heat supply services, through the launch of new local electric power companies and participation in concessions for the privatization of waterworks services, which has expanded in recent years.

In **the infrastructure field**, JFE Engineering is developing and introducing new products, construction methods, and materials that address needs to maximize the use of already built infrastructure, by reinforcing and extending the service life of infrastructure such as bridges, gas plants, waterworks systems, and pipelines.

**DX projects:** We are advancing the use of digital technology in all kinds of engineering work. In addition to increasing the efficiency of work, our aim is to widely reform work processes and provide digital twin and digital services that utilize AI and IoT, such as adding new functionality to products and services.

#### Business fields for medium- to long-term initiatives

Field	Main Applicable Businesses	Revenue Target for FY2030
Waste to resources	Establish stable profit base in the domestic environment business Priority investment and expansion of domestic market in the recycling business—Food, plastic, waste incineration, and power generation	¥450 billion
Carbon neutrality	Put priority in renewable energy (offshore wind power generation, biomass power plant, solar power plant, geothermal power plant, etc.) Develop carbon-neutral technologies	¥200 billion
Combined utility services	Shift to comprehensive business model, including for efficient operation of facilities to contribute to energy savings and decarbonization	¥100 billion
Infrastructure	New technologies (new products, construction methods, and materials) to address newly arising needs for strengthening and improving life of infrastructure	¥250 billion



**Advances in DX**  
Strongly advancing DX as a technology platform in four business fields

# TOPICS

## Infrastructure / Overseas

### Construction of LNG Receiving Facility in Taiwan

JFE Engineering is currently constructing LNG receiving process pipe facilities as part of an order received from Taiwan's state-run oil and gas company. This project involves the construction of offshore facilities 1.2 kilometers from the coast at the third LNG receiving facility in Taoyuan City. To minimize the risk of construction interruptions due to severe marine conditions and to shorten the construction period, we adopted a modular construction method,\* in a first for Taiwan. The Taiwanese government has set a goal to increase the percentage of electricity generated with natural gas to 50% of the total by 2025, making the development of LNG infrastructure an urgent task. Since the 1970s, when LNG was first introduced in Japan, JFE Engineering has built an extensive track record in the construction of LNG receiving facilities. Leveraging our wealth of experience and technology, we will continue to contribute to a reliable energy supply around the

world and facilitate the transition to low carbon.

\* A construction method where structures, piping, electrical instrumentation, and other components are assembled in modular units, with pipe pressure testing, cleaning, painting, and insulation completed before being transported by sea to the construction site for installation.



## Infrastructure

### Removal of Bridge Girders and Piers at Gofukubashi and Edobashi Entrances of Tokyo Metropolitan Expressway

Our joint venture with Shimizu Corporation successfully completed the removal of the bridge girders at the Gofukubashi and Edobashi entrances on the Tokyo Metropolitan Expressway's beltway route in December 2023, followed by the removal of the bridge piers in February 2024. Despite severe constraints, we devised and implemented various construction methods, including utilizing the tidal changes of the Nihonbashi River for the removal, minimizing the impact on the operational trunk line of the expressway, successfully completing this challenging project. This marks the first step toward the undergrounding of this section, which will restore views of clear blue skies above the Nihonbashi River. Moving forward, we will continue to meet needs for the reconstruction and modernization of bridges

nationwide by utilizing the latest technology and our extensive experience.



Photos courtesy of Metropolitan Expressway Co., Ltd.

## Carbon Neutrality

### Mori Binary Power Plant Commences Operations

In June 2021, we established Mori Binary Power LLC in collaboration with Hokkaido Electric Power Co., Inc. and Tokyo Century Corporation to promote geothermal binary-cycle power generation. This joint venture constructed the Mori Binary Power Plant in Mori Town, Kayabe district, Hokkaido, which began commercial operations in November 2023. Binary-cycle power generation uses a medium with a lower boiling point than water to drive turbines. It effectively utilizes the thermal energy from hot water that was previously reinjected into the ground at the adjacent Mori Power Plant operated by Hokkaido Electric Power. By reliably providing electricity generated from geothermal energy, a sustainable and 100% domestic renewable energy source, we contribute to achieving carbon neutrality by 2050.



## Trading Business

## JFE Shoji Corporation



### Increasing our abilities to offer proposals and convey information, aiming to be a trading company with presence

As the JFE Group's core trading company, we constantly consider the overall optimum sharing strategies with other Group companies to work on strengthening functions. As well, we seek to further increase our abilities to offer proposals and convey information, growing sustainably with our customers to be a company with a strong market presence. The company contributes to the realization of a sustainable society by providing eco-products via its corporate activities and initiatives for the global recycling of resources. to achieve sustainable growth.

### Toshinori Kobayashi

President and CEO  
JFE Shoji Corporation

#### Strengths

- Robust business foundation with steel-related businesses such as steel products, raw materials, and machinery
- Solid sales, processing, and distribution network in the four global key regions (Japan, the Americas, China, and ASEAN)
- Comprehensive Group capabilities through strong collaboration with JFE Steel and JFE Engineering
- Highly specialized human resources with the ability to propose projects backed by extensive experience in steel-related businesses

#### Threats and risks

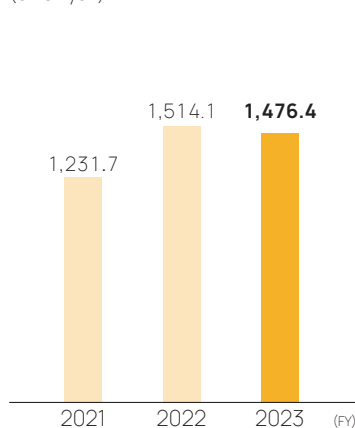
- Heightened geopolitical risks and disruptions in global trade caused by protectionist government policies
- Slowdown in the global economy from monetary tightening to control inflation in Europe and the United States
- Oversupply of steel products due to prolonged slump in China's real estate sector
- Slower growth in the domestic market and contraction in the manufacturing industry due to declining population

#### Opportunities

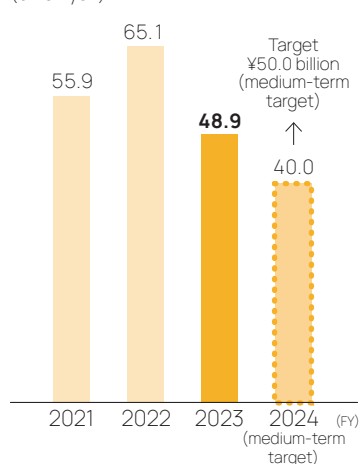
- Growth in construction materials markets in the United States and Australia, where demand is likely to hold steady
- Increase in demand for automotive motors from advances in electrification amid tougher environmental regulations in Europe
- Stronger demand for steel in the emerging market of India
- Higher demand for eco-products that can help reduce CO<sub>2</sub> emissions and conserve energy, in response to growing social expectations in the context of ESG and the SDGs
- Increasing potential to create new value added and provide services in distribution using DX and AI

## Fiscal 2023 results

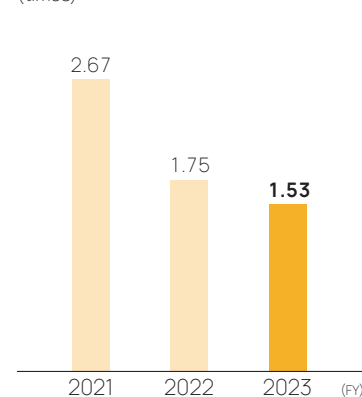
### Revenue (billion yen)



### Segment profit (billion yen)



### Ratio of consolidated income to non-consolidated income (times)



Key measures in the Seventh Medium-term Business Plan and fiscal 2024 earnings targets

1. Initiatives in priority fields

- Electrical steel: Establish No. 1 position in global processing and distribution
- Strengthen supply chain management of automotive steel composite materials
- Accelerate activities overseas in construction materials business
- Fully capture steel demand in Japan

2. Strengthen purchasing and sales capabilities

- Expand our presence in steel, raw materials, machinery and materials

3. Initiatives for new business opportunities

- Expand environmental-solution businesses
- Promotion of DX

Segment profit

¥40 billion\*

(Build a structure able to reliably generate segment profit of ¥40 billion)

\* Target ¥50 billion by final year of the medium-term business plan

Initiatives in Fiscal 2023

In Japan, demand for steel recovered in the automobile sector as semiconductor supply constraints were alleviated. In the civil engineering and construction sectors, however, demand was largely unchanged from the previous fiscal year, as small/medium-size projects were postponed due to labor shortages and rising material costs. Overseas, steel demand continued to grow strongly in India, while in the United States and other advanced economies, high interest rates and inflation led to a slower recovery in demand. In China, demand for steel remained weak amid a prolonged slump in the real estate sector.

In this business environment, the JFE Shoji Group continued to strengthen the processing and distribution functions of core businesses—electrical steel sheets, automotive steel, overseas construction materials, and domestic steel—based on the Seventh Medium-term Business Plan formulated in fiscal 2021, with a focus on its global four-pillar strategy.

In electrical steel sheets, JFE Shoji Serbia d.o.o. Beograd (JSS) was established in Europe, where demand for motor cores is likely to grow due to stricter environmental regulations aimed at achieving carbon neutrality. In automotive steel, JFE Shoji Steel Service Center Bajio (JSSB) installed a laser blanking line in Mexico, where automakers are making new and additional investments, to capture expanding demand. In the overseas construction materials business, we worked to enhance our presence on the West Coast of the United States by strengthening distribution functions through deeper collaboration between CEMCO, which we acquired last fiscal year, and our existing operating companies. Additionally, in May 2024 we acquired Studco Global Holdings, Inc. (STUDCO), which has manufacturing and sales bases on the East Coast of the

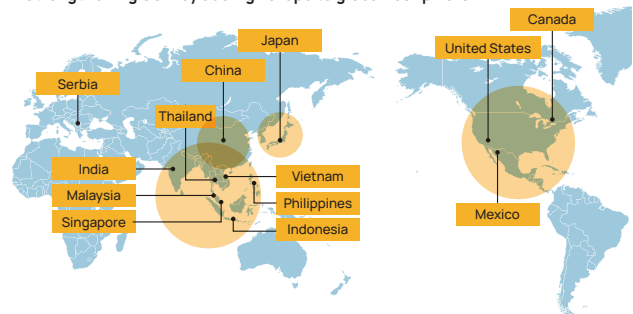
United States and in Australia, with the aim of further expanding business revenue. In the domestic steel business, we focused on expanding functions, such as processing capacity, especially in the East Japan area.

We also invested in OM Holdings Limited, which operates a ferroalloy production business in Sarawak, Malaysia, to reinforce our stable supply system for green ferroalloys using renewable energy from hydropower. In India, we invested in Arfin India Limited, a producer and seller of aluminum products and ferroalloys, in an effort to expand sales of aluminum deoxidizers for steel production in India and surrounding regions, where production of steel is expected to grow.

Going forward, in both Japan and abroad, we will continue to strengthen our processing and distribution supply chain and steel processing businesses to build a stable earnings base.

JFE Shoji Group's locations of electrical steel sheet processing bases by country

—Strengthening SCM by adding Europe to global four pillars—



TOPICS

Electrical Steel Sheets

Electrical Steel Sheet Processing and Sales Company in the Republic of Serbia

We have established JFE Shoji Serbia d.o.o. Beograd (JSS), our first processing base in Europe, in the city of Indija, Republic of Serbia. We will construct a new plant in Serbia, which is located almost at the center of the Balkan Peninsula and borders numerous Eastern European countries. Due to its advantageous location for production bases, Serbia has recently attracted a number of automobile manufacturers and EV-related companies. The groundbreaking ceremony for JSS' new plant in March 2024 was attended by approximately 50 guests, including the President of Serbia and the Japanese Ambassador to Serbia. The President said that this investment is significant for Serbia, and promised full support for this endeavor.

In Europe, demand looks likely to increase for drive motors used in EVs in response to stricter environmental regulations, as well as demand for automotive motors used to enhance the functionality and convenience of automobiles. We therefore expect demand to

strengthen for our motor cores. The new plant is scheduled to start full-scale operations in July 2025. By establishing this processing and sales base in Europe, a growing market, we are expanding our global four-pillar system (Japan, the Americas, China, and ASEAN) to include Europe. With this move, we aim to tap into growing demand for motor cores in Europe and strengthen our business to become the No. 1 global processor and distributor of electrical steel sheets.



JFE Shoji Serbia d.o.o. Beograd

## Shipbuilding Business

Japan Marine United Corporation  
(equity-method affiliate)



### Challenges and Changes in a New World A company that creates shared value with customers

Japan Marine United provides high-value-added products and services while swiftly responding to the latest changes. Balancing manufacturing with technological development, the basis of its cutting-edge technologies, Japan Marine United is committed to addressing issues in a sustainable society, such as carbon neutrality, safety and security, and digitalization.

#### Nobuyuki Nada

President and CEO  
Japan Marine United Corporation

#### Strengths

- Ability to build large merchant ships, such as high-performance GHG-reducing ships
- Ability to develop new fuel ships and new fuel carriers
- Extensive years of experience and development capabilities in icebreakers
- Renewable energy technologies, including offshore wind power
- Capital and business alliance with Imabari Shipbuilding Co., Ltd.
- Naval ship building and repair structure with four shipyards and five base

#### Threats and risks

- Greater volatility in foreign exchange rates, personnel costs, and prices for steel and machinery
- Tougher competition due to excess supply of ships from China and South Korea
- Slowdown in the global economy and maritime transportation due to inflation, rising interest rates, and international tensions
- Concerns about training advanced technical personnel, securing production workforce

#### Opportunities

- Stronger demand for new ships and replacements to reduce GHG emissions
  - ▶ Stricter regulations for CO<sub>2</sub> emissions from ships
  - ▶ More demand for carbon-neutral chemistry carriers
  - ▶ Expansion in wind farm experiments and projects
- Stronger needs for building and maintaining naval ships as national security strategy is reinforced

### Initiatives in Fiscal 2023

In the merchant ships business, we expanded our order book in collaboration with Nihon Shipyard Co., Ltd. We secured orders for ammonia-fueled ships, methanol dual-fuel ships, and LNG dual-fuel ships,\* with our development, engineering, and construction capabilities receiving high praise. Additionally, a 24,000-TEU container ship, one of the largest in the world that we delivered last year, was recognized with the Ship of the Year Award for fiscal 2023 for its high performance and rapid delivery as part of a joint lot order with Imabari Shipbuilding Co., Ltd. We also constructed the first LNG dual-fuel Capesize bulk carrier in Japan, which is now operated by JFE Steel. On the technology front, Japan Marine United is engaged in the development and engineering of new fuel ships and R&D in unmanned navigation technology, while also expanding its digital navigation services for ships.

In the naval ships business, we received orders for four new patrol vessels from the Ministry of Defense, and earnings increased for the repair of naval vessels for the Ministry of Defense and the U.S. Navy.

In the offshore and engineering business, we completed the development of floating offshore wind platforms for a Green Innovation Fund Project. Japan Marine United has formed a consortium with several related companies, including JFE Engineering, and applied for the next phase of this project, which will involve demonstration testing.

\* Dual-fuel ships: Vessels capable of switching between heavy oil and gas as fuels.

### Future Initiatives

In the core merchant ships and naval ships businesses, Japan Marine United will tap into growing needs for shipbuilding and ship repair, build a sustainably profitable business structure, and advance growth strategies that combine technologies, businesses, and human resources. In addition to past initiatives, we are keen to reduce costs, eliminate bottlenecks in the shipbuilding process, alleviate long-term labor shortages, establish advanced digital designs that leverage AI and robotics technologies, mechanize and automate the shipbuilding process, and improve the capacity of our existing facilities. In technological development, Japan Marine United intends to participate in social implementation related to the development of practical offshore wind power, early establishment of design and shipbuilding technologies for new carriers of ammonia, hydrogen, and liquefied carbon dioxide, with an eye on achieving the SDGs and a carbon-free society from 2030.

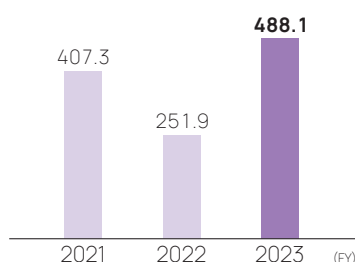


Image of ammonia-fueled ammonia carrier

### Fiscal 2023 results

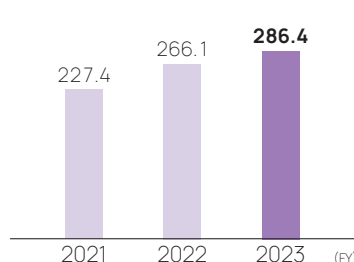
#### Orders received

(billion yen)



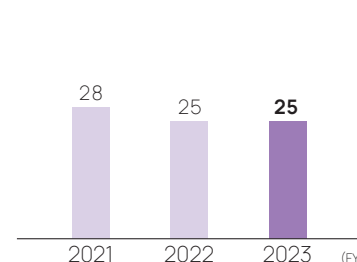
#### Net sales

(billion yen)



#### Vessels built

(vessels)



# Annual Highlights

## JFE Holdings

### 2023

- Apr. Revised JFE Group Basic Policy on Human Rights
- Jun. Selected for Noteworthy DX Companies 2024
- Jul. Selected for inclusion in all ESG investment indexes used by GPIF
- Sep. Announced issuance of euro-yen convertible bonds with new stock warrants due 2028
- Sep. Announced OHGISHIMA 2050 conceptual plan for re-use of land housing JFE Steel's East Japan Works (Keihin district)
- Sep. Decided terms for issuance of euro-yen convertible bonds with new stock warrants due 2028
- Sep. Published JFE Group Report 2023
- Sep. JFE 21st Century Foundation decided university research grants and grant research for fiscal 2023

- Sep. Published JFE Group Sustainability Report 2023
- Dec. Started to air a new commercial

### 2024

- Jan. Updated green/transition finance framework
- Feb. Published JFE Group DX Report 2023
- Feb. Won Copper Medal in Environmental & Sustainable Corporation Division of ESG Finance Awards
- Feb. Exhibited at WIND EXPO Wind Power Exhibition
- Mar. Won DEALWATCH AWARDS 2023 sponsored by London Stock Exchange Group

## JFE Steel (Steel Business)

### 2023

- Apr. Received FY2023 Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology, Awards for Science and Technology (Development Category) for development of ultra-heavy high-strength steel plate for construction of ultra-large containerhips
- Apr. Awarded 2023 Steel Sustainability Champion by World Steel Association
- May. Commenced supply of JGreeX™ green steel
- Jun. Received National Invention Award for development of ultra-high-strength thin steel sheet that improves automobile fuel efficiency and collision safety
- Jun. R&D into line pipe for transporting high-pressure hydrogen gas selected for Nippon Foundation's DeepStar Joint Project
- Jul. Transitioned a portion of Kurashiki district to open environments for core systems
- Jul. Acquired new construction method technology certification for CaO-improved soil, a material that uses steel slag
- Jul. Built a collaborative structure for establishing a supply chain for Green Ironmaking with Low Carbon Emission
- Jul. Developed FLExB™ Welding, a welding method that helps improve fatigue resistance of steel structures
- Aug. Conducted demonstration test of automatic steel material transport using special heavy-duty vehicles in Kurashiki district
- Aug. J-TerraPlate™, a large and heavy steel plate, chosen for wind power projects
- Aug. Developed GAZMASTAR™ automatic cleaning robot for harsh conditions
- Sep. Began selling J-mAlster™ fault recovery support system with IBM Japan
- Oct. Received Safety and Health Excellence Recognition from World Steel Association

- Oct. Commenced sales of BO-Eye™ breakout detection system for continuous casters
- Nov. Held Carbon Neutral Strategy Briefing 2023
- Nov. Developed SHIBORAN-NEO™ welding method that helps reduce labor in construction work
- Dec. Received 2023 Environmental Minister's Award for Climate Change Action in the development of ultra-high-pressure hydrogen storage containers that combine steel and carbon fiber reinforced plastic layers
- Dec. Signed a long-term sales agreement with U.S.-based ZAG Corporation for blast furnace granulated slag for cement raw materials
- Dec. Reached a basic agreement with MyFarm and Indonesia's KUD to promote direct seeding method for rice using KONBUJIN™

### 2024

- Jan. Obtained ISO 27001 certification for information security management systems
- Jan. Finished construction of Japan's first large-size LNG-fueled ship for transporting steel raw materials
- Feb. Established grain-oriented electrical steel sheet production and sales company with JSW Steel in India
- Feb. Obtained certification for fire-resistant coating method ARCHITETSUT™ Wood Fireproof Column using wood for steel pipe columns
- Mar. Developed drone-mounted gas leak detector
- Mar. Increased wages to acquire, retain, and better motivate talented personnel
- Mar. Started to provide solutions for steel industry in collaboration with Hitachi
- Mar. Received Okochi Memorial Foundation's 70th Technology Prize for cyber-physical system for blast furnaces

## JFE Engineering (Engineering Business)

### 2023

- Apr. Finished acquiring shares in Omuta Recycle Power
- Apr. Introduced Zero EmissionsPlan™ On-Site Service, a solar power generation PPA model of Urban Energy, and achieved 50 MW
- May. Commenced full-scale operation of food biogas power generation company Bios Komaki (J&T Recycling)
- Jun. Introduced JFE-Multisite Energy Total Service at 11 sites of Nippon Kayaku
- Jul. Commenced proof-of-concept testing of GX-Marble, a CO<sub>2</sub> separation and collection package
- Jul. Received order for plant reinforcement project from AGC Si-Tech
- Aug. Started operations of large-scale customer-side battery energy storage system
- Aug. Entered into capital and business agreement with Kankyo no Mikata (J&T Recycling)

- Aug. Completed installation of container crane at Fushiki Toyama Port in Toyama Prefecture
- Sep. Commenced operations of Nyuzen Offshore Wind Farm
- Oct. Launched operations of Tsukishima JFE Aqua Solution
- Nov. Started commercial operations of Mori Binary Power Plant

### 2024

- Jan. Established J Circular system with plans to construct largest plastic recycling facility in Tokyo metropolitan area
- Feb. Received order for PVC resin raw material storage facility expansion project in Indonesia
- Mar. Commenced full-scale operations of waste processing facility in Malaysia (J&T Recycling, JFE Engineering Malaysia)

## JFE Shoji (Trading Business)

### 2023

- Nov. Installed solar power panels at subsidiary Tochigi Shearing, a thick steel plate processor
- Dec. Invested in OM Holdings, which engages in ferroalloy production in Malaysia

### 2024

- Mar. JFE Shoji India invested in Arfin India, a production and sales company in aluminum products and ferroalloys
- Mar. Held a groundbreaking ceremony for newly established electrical steel sheet processing and sales company (JSS) in Serbia

## Japan Marine United (Shipbuilding Business)

### 2023

- Jun. Delivered ONE INNOVATION, a 24,000-TEU containership, one of the world's largest
- Jul. Participated in second stage of Nippon Foundation's unmanned ship project, aiming for social implementation
- Oct. Conducted christening and launch ceremony for a minesweeper planned in fiscal 2020

### 2024

- Jan. Decided to construct an ammonia-fueled gas carrier
- Jan. Delivered Japan's first LNG dual-fuel Capesize bulk carrier, SG OCEAN
- Feb. Received Approval in Principle (AIP) certification for a special vessel for installing floating offshore wind turbines as a Green Innovation Fund Project
- Mar. Established method for evaluating ship performance in actual seas for ships under construction contracts

## Human Resources

The abilities of each and every employee are a crucial factor in ensuring that the JFE Group is able to continue enhancing its corporate value in a rapidly changing and increasingly complex business environment. The Company views its employees as the driving force behind corporate growth, and is committed to securing and nurturing talent through active investment in human resources. JFE is focused on initiatives that maximize the skills and vitality of its employees. Specifically, the Company has identified “ensuring occupational safety and health” and “securing and training diverse talent” as key management priorities related to human resources. To tackle these priorities, JFE has established and is actively working to achieve quantitative KPIs.

### Ensuring Occupational Safety and Health

In order to sustain business activities, our basic stance is to prioritize safety above all else and help employees and their families maintain their physical and mental health. Working together with Group companies and our partners, we aim to create safe and healthy workplaces.

#### Prevention of Workplace Accidents

The JFE Group views establishing a safe work environment and preventing occupational accidents as fundamental requirements for allowing diverse employees to work with peace of mind. We have set KPIs for the number of fatal accidents (zero incidents) and the lost-work injuries rate. Although we did not meet our goals for fiscal 2023, we will continue to prioritize investment in safety measures as

outlined in the Seventh Medium-term Business Plan, with an annual investment of approximately ¥10 billion across the Group. We are advancing initiatives aimed at fundamentally preventing accidents caused by the equipment itself.

We aim to create safer and healthier work environments by continuing to effectively operate the occupational health and safety management system.

#### JFE Steel's Initiative

##### Acquisition of ISO 45001 certification across all business units

At JFE Steel, we are focusing on the companywide deployment of countermeasures to prevent similar and recurring accidents, including near-miss incidents. We are also strengthening workplace activities so that employees take ownership of past accidents. Furthermore, to promote occupational safety and health management more autonomously and systematically throughout the organization, we have established an occupational

safety and health management system compliant with ISO 45001. We have obtained ISO 45001 (JIS Q 45001) certification for all business units.

By continually and effectively operating the occupational safety and health management system, we are committed to creating a safer and healthier workplace.

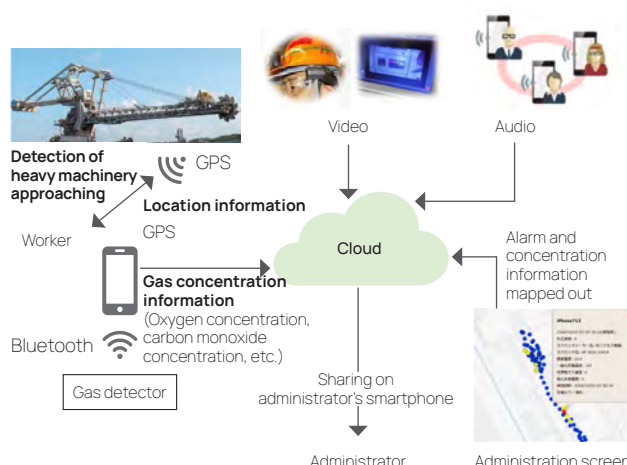
#### Key points of PDCA cycle at JFE Steel





## Securing the safety of employees using AI

We ensure the safety of workers at manufacturing sites by utilizing the latest ICT, AI, and data science to pursue the development and commercialization of further advanced technologies. One example is the use of the safety support system. This system has communications functions such as audio and video sharing within the Group, and also allows the sharing of information including the locations and status of workers, detection of approaching heavy machinery, and operational environment such as the presence of gas, to ensure the safety of workers. This information is also shared to administrators through smartphones and the cloud. Moreover, we are digitalizing on-site risk prediction activities with voice recognition input instead of the previous paper-based process, and this is leading to more accurate risk predictions. We will continue to strive to secure the safety of workers using the latest technology.



## JFE Engineering's Initiatives

JFE Engineering has set shared companywide priorities that must be adhered to by all of its employees and the employees of its partner companies. Focusing on eradicating work injuries, management promotes safety measures while identifying the sources of risks through risk assessments that take into account the uniqueness of operations in each business division. JFE Engineering is taking a multifaceted approach to occupational health and safety management with the use of IT for remote surveillance and measurement, work surveillance, information dissemination systems, and safety management

## JFE Shoji's Initiatives

JFE Shoji aims to achieve zero serious injuries at its coil centers and other processing bases, and has set the goal of eliminating unsafe work that could result in serious injuries. Patrolling worksites and using security camera recordings to identify unsafe work conditions, JFE Shoji is taking steps to improve facilities. Management aims to enhance the level of occupational health and safety activities at each company by sharing knowledge and information through safety managers assigned to each group company.

Additionally, from the perspective of enhancing safety to

administrative support systems. For work entailing the installation of equipment on top of silos with complex shapes, JFE Engineering creates a high-precision diagram using 3D measurement data from drones in order to reduce the amount of work performed in high locations, and to avoid the need to redo work, creating a safer work environment.



Example of reducing work in high locations by using high-precision 3D measurement data generated with drones

prevent accidents caused by equipment, JFE Shoji is promoting the interlocking of coil lifting equipment as part of its disaster prevention measures related to suspended loads. This interlock system ensures that the equipment will not operate unless certain conditions are met.



Regular safety inspection at a group company conducted by the vice president in charge of safety (Vice President Kitajima)

## Ensuring the Health of Employees and Their Families

In order to realize safe and highly attractive workplaces that provide motivation to workers and to powerfully promote the development of environments where diverse human resources can demonstrate their full potential, the JFE Group has formulated

the JFE Group Health Declaration and collaborates with its health insurance union and industrial health staff to strengthen employee health.

### JFE Group Health Declaration

1. JFE, recognizing that safety and health are fundamental for fulfilling its mission, creates workplaces in which every employee can work with vigor.
2. 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.
3. JFE gives top priority to safety and health and to creating a health culture in which each employee takes personal responsibility.

The JFE Group has set KPIs related to the implementation rate of specific health guidance as well as for reducing smoking rates. The reduction of smoking rates is positioned as an initiative that also contributes to the maintenance and promotion of family health, through measures targeted at employees to

prevent passive smoking at home. As we make progress toward these goals, information exchanges are regularly carried out among the various operating companies. Going forward, we aim to achieve further improvement by horizontally deploying initiatives that have had a significant impact at each company.

## Securing and Training Diverse Talent

The JFE Group views human resources as the driving force behind corporate growth and is committed to securing and developing the talent necessary to advance its management strategies. The Company is also focused on fostering a corporate culture where employees can work with enthusiasm and take on new challenges by promoting diversity and inclusion, while enhancing job satisfaction.

### Basic Policy on Human Resource Management

The Basic Policy on Human Resource Management serves as an overall guideline for the JFE Group in securing and developing diverse talent. Each Group company implements specific measures based on this policy.

#### JFE Group's Basic Policy on Human Resource Management

(Full text: [https://www.jfe-holdings.co.jp/en/sustainability/social/human\\_capital/](https://www.jfe-holdings.co.jp/en/sustainability/social/human_capital/))

- 1 Respect human rights and facilitate fair management of human resources
- 2 Foster a corporate culture that nurtures people and promotes satisfying workplaces
- 3 Diversify human resources
- 4 Recruit and steadily nurture excellent human resources

### DX Human Resource Development

We aim to enhance our training and education systems to improve the abilities of each and every employee, while placing emphasis on the training of global human resources for expanding overseas businesses. In recent years, the JFE Group has been focused on securing and developing the human resources necessary to pursue DX strategy, which is one of its management strategies.

Data science (DS) technology is being applied in industry at a rapid pace. In order to incorporate DS technology into its business processes, JFE Steel has established a system to independently foster data scientists in-house. Having knowledge unique to the field of the steel industry is essential to applying DS in actual manufacturing and on R&D front lines. With the aim of fostering in-house data scientists and human resources that can harness DS, the Company established a pyramid-shaped rank-based training system according to the required level.

As of the end of fiscal 2023, we have trained 610 in-house data scientists, increasing by about 4 times the number of annual DS-related initiatives compared with fiscal 2018 (average between fiscal 2021 and fiscal 2024). By pursuing further training, we plan to increase the quality of our trained in-house data scientists while increasing their number to 660 by the end of fiscal 2024. Starting in fiscal 2023, we aim to instill our vision and change mindsets through training on DX literacy for all employees, in addition to mindset training for executive officers and managers.

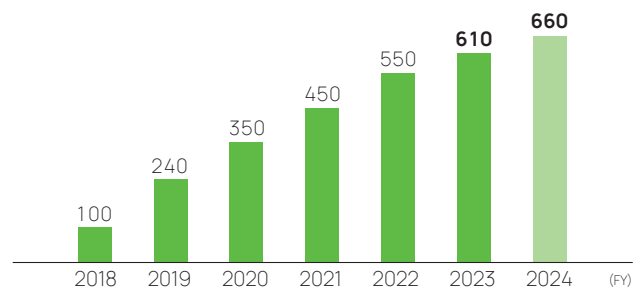
At JFE Engineering, we are holding data scientist training courses where employees can gain expert knowledge about data analysis and visualization, as well as machine learning. We aim to have a total of 210 employees take this course by the end of fiscal 2024.

#### Educational programs by level (JFE Steel)

Level	Target	Training method
① DS pioneer	<ul style="list-style-type: none"> <li>Research laboratories, researchers</li> <li>Manufacturing engineers</li> </ul>	<ul style="list-style-type: none"> <li>Dispatched to academic institutions for training</li> <li>Training at research laboratories, JDXC™</li> </ul>
② DS evangelist	<ul style="list-style-type: none"> <li>Electrical maintenance engineers</li> <li>Manufacturing engineers</li> </ul>	<ul style="list-style-type: none"> <li>Training in use of advanced DS tools</li> <li>Primarily OJT</li> <li>DS general education</li> </ul>
③ DS applier	<ul style="list-style-type: none"> <li>All technology-related employees</li> </ul>	<ul style="list-style-type: none"> <li>Training on introduction of DS tools</li> </ul>
④ DS user	<ul style="list-style-type: none"> <li>All clerical employees</li> </ul>	<ul style="list-style-type: none"> <li>Literacy training (e-learning)</li> </ul>

- Launched level-specific training programs companywide in FY2018
- More than 80% of data scientists working on DS operational issues

#### Training of data scientists (JFE Steel)



We have trained about 610 data scientists as of the end of FY2023. We aim to increase this to 660 people by the end of FY2024.

## Diversity and Inclusion

Positioning diversity & inclusion (D&I) as an important management issue, the JFE Group must be committed to diversity to see it flourish. Working in unison, we are formulating and rolling out Companywide policies that include setting up D&I promotion committees chaired by the presidents of each operating company. We also have an ongoing effort to raise awareness of diversity through training tailored to managers.

The Board of Directors discussed policies and targets related to the empowerment of women, and in fiscal 2022 raised its target for the ratio of female hires and set a target for women qualified as section managers or above to be 10% or more by fiscal 2030 (20% or more in management and sales divisions). At each operating company, management is advancing various measures related to recruitment, retention, and placement and development. In recruitment, for example, JFE Steel is expanding the hiring of mid-career women and augmenting advertising activities so that women can more easily envision a career working at JFE Steel. In terms of retention, we are focusing efforts on hosting networking events for female employees and actively dispatching them to external training programs at Keidanren (Japan Business Federation) and Japan Women's Innovative Network (J-Win), in order to promote networking both inside and outside the Company and create role models for others to follow. Regarding placement and development, we are formulating individual placement and development plans for female employees

and carrying out systematic training aimed at management positions. JFE Engineering has introduced a mentoring program for female managers led by executive officers. JFE Shoji is also conducting training for supervisors and their female employees aimed at cultivating an awareness of career options for women and a career-supporting mindset among managers.

We are also focusing efforts on helping male employees participate in child-rearing, and have set as a common target for all operating companies the goal of getting all male employees whose partner has given birth time off for child-rearing and also days off as needed for childcare. In addition to disseminating information about in-house systems, we are working to cultivate a culture in which more male employees can take paternity leave, by conveying messages aimed at encouraging men to take paternity leave and sharing examples of employees who have availed themselves of this leave.

Good examples from each operating company are regularly shared among Group companies, and joint initiatives across operating companies are also underway. In fiscal 2023, the presidents of the Company and its operating companies gathered for a round table discussion of the importance of promoting D&I and future issues, and committed to fostering a culture with broad internal awareness of these issues. Through such efforts, we aim to further promote diversity across the entire JFE Group.

## Engagement

We believe that establishing an internal environment where employees find value in their work is essential for diverse talent to fully demonstrate their abilities. Each operating company conducts an engagement survey once a year to regularly grasp employee sentiment. As a KPI, we have set a target of "over 75% affirmative responses to questions related to job satisfaction," and this KPI helps us identify issues related to job satisfaction and consider measures for improving the work environment. We have implemented various measures, such as instituting an in-house open recruitment system that offers opportunities for new career challenges through voluntary actions, and holding one-on-one meetings to support employee growth. Moving forward, we aim to further improve work motivation through discussions with management and other initiatives. In addition, wages are a key factor in improving job satisfaction. In fiscal 2024, JFE Steel and JFE Engineering introduced new financial resources of ¥30,000 per month, resulting in an average wage increase of over 12% when combined with regular pay increases. JFE Steel also established the Human Resources Strategy Department in April 2024 to implement multifaceted initiatives, including not only human resource systems but also corporate culture reform. We launched the ReFuture PROJECT as part of a corporate transformation aimed at enhancing employee job satisfaction and fostering mutual growth of the Company and its employees. This project entails the creation of a future vision for the Company, investing in manufacturing sites, business offices, and welfare facilities to create a more employee-friendly work environment, and revising the personnel wage system to improve job satisfaction for all employees. We will

continue to pursue initiatives to further improve job satisfaction through ongoing discussions with management, among other efforts.

Creating a comfortable work environment is also a critical element for employees to find their work fulfilling. Therefore, at the JFE Group, we are promoting initiatives for a new way of working aimed at allowing diverse employees to choose flexible working styles based on their individual circumstances. This is to ensure that they find motivation and job satisfaction while helping to improve the Company's productivity. For example, we have expanded remote work systems, introduced coreless flextime systems, implemented chat and web conferencing tools, advanced RPA, and have moved toward paperless operations. Through these initiatives, we aim for higher-value-added work styles. We are also cultivating a culture that makes it easier to take time off, for instance by setting recommended annual leave days, to enhance work-life balance.

### Advertising Activities (Sus-tetsu-nable)

## サステナブル!

### Sus-tetsu-nable!\*

\* A term unique to our Company, it combines "TETSU" ("steel" in English) and sustainability, both of which are essential to society

We produce corporate commercials aimed at introducing our stakeholders to our efforts toward realizing a sustainable future for the JFE Group. The objective is to get stakeholders to feel more closely connected with us.

We actively engage in these efforts in anticipation that they are broadening awareness through advertising and promotional activities, and will also contribute to enhancing employee engagement and strengthening our hiring capabilities.

# Social and Relationship Capital

## Examples of Dialogues with Our Main Stakeholders

Stakeholders	Approach	Examples of dialogues with our main stakeholders	Others	
			Frequency (per year)	Scale, etc.
Shareholders/ 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 promote constructive dialogue as well as provide management with the information acquired, with the aim of maintaining and improving the relationship of trust.	Ordinary General Meeting of Shareholders	1	Approx. 230,000 persons (Unit shareholders)
		IR meetings (mainly with fund managers and analysts at institutional investors)		54 domestic companies (181 times) 86 overseas companies (150 times)
		SR meetings (mainly with ESG and voting rights officers at institutional investors)		25 domestic companies (44 times) 18 overseas companies (25 times)
		Investors' meeting ESG briefings (for analysts and ESG officers)	5	Approx. 1,100 persons in total
		Online corporate briefings (for individual investors)		Online views: 20,000 times
		On-site and online plant tours (for individual investors)	14	Approx. 1,900 persons
		Shareholder newsletters (JFE Dayori)	2 (Mid-year and annual)	Approx. 300,000 copies/issue
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.	Communication through sales activities and support for quality assurance	As needed	Conducted at each operating company
		Interviews and questionnaires, such as that on customer satisfaction	As needed	Conducted at each operating company
		Information via websites (product information), etc.	As needed	
Employees	With the recognition of top management that creating workplaces to provide dignity and job satisfaction for all is essential for maximizing the potential of individuals, we have formulated the Basic Policy on Human Resource Management and the Health Declaration and are conducting various activities toward attaining the goals.	Communication through daily operations and in the workplace	As needed	
		Internal newsletters and intranet	As needed	
		Various labor-management committees	2 to 4	Management and labor unions at each operating company
		Corporate Ethics Hotline	As needed	134 calls in FY2023
		Various training sessions	As needed	Position-specific, compliance, human rights, etc.
		Family days (visits by employee families, lunch at employees' cafeterias, etc.) * Online for FY2020 and FY2021	As needed	Conducted at each operating company
		Corporate Ethics Awareness Survey	1 (every 2 years)	At the Company and operating companies
Local communities	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 coexistence 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.	Communication through local residents' associations, events, etc.	As needed	
		Events at manufacturing bases (festivals, etc.)	Approx. once in each region	Approx. 170,000 persons a year
		Plant tours	As needed	80,000 or more persons a year
		Clean-up activities (vicinity of manufacturing bases, regional cleaning, etc.)	As needed	
		Sports promotion (baseball or jogging workshops, various sports competitions, etc.)	As needed	
		Others (education at elementary schools, craft workshops, workplace experience events, etc.)	As needed	
		Information via websites (environmental information, etc.)	As needed	
Social contribution through JFE 21st Century Foundation (various research support, regional activity support, etc.) ▶ JFE 21st Century Foundation: <a href="http://www.jfe-21st-cf.or.jp/eng/">http://www.jfe-21st-cf.or.jp/eng/</a>	As needed			

### Engagement with Government Entities to Attain Carbon Neutrality

Initiatives in the steel industry	Participation in Japan Iron and Steel Federation's Carbon Neutrality Action Plan
Initiatives in Japan's financial circles	Participation as member of Japan Iron and Steel Federation in Ministry of Economy, Trade and Industry (METI)'s Formulation of Technology Roadmap for Transition Finance in Iron and Steel Sector
	State of adoption of Green Innovation Fund Projects
	• Steel business: Hydrogen Utilization in Iron and Steelmaking Processes (COURSE 50, carbon-recycling blast furnace, hydrogen direct-reduction steelmaking, electric arc furnace)
	• Engineering business: Achieving Carbon Neutrality in Waste and Resource Circulation
	• Engineering business, shipbuilding business: Cost Reductions for Offshore Wind Power Generation
	Participation in GX League
	Financing for GX Acceleration Agency
	Provision of policy ideas to the government
	• Eighth GX Implementation Council (November 7, 2023)
	• 56th Advisory Committee for Natural Resources and Energy (June 6, 2024)
Global initiatives	Participation in external initiatives
	• TCFD Consortium • Japan Climate Leaders' Partnership (JCLP) • UN Global Compact
	Presentations in Japan
	• GGX x TCFD Summit (sponsored by METI)
	• Roundtable discussion on "IRA and GX Strategy: U.S.-Japan Partnership for a Net-Zero World." (sponsored by the U.S. Embassy in Tokyo, the U.S.-Japan Council, and the Institute of Energy Economics, Japan)
	Participation in World Steel Association's Climate Action Data Collection Programme
	India-Japan Public and Private Collaborative Meeting on Iron and Steel Industry
	ASEAN-Japan Steel Initiative
	China-Japan Steel Sector Environmental Preservation and Energy Conservation Advanced Technology Exchange
	Presentations in foreign countries
• Low-Carbon Transition for the Built Environment (sponsored by the IES/StructE Joint Committee and National University of Singapore)	
• 1st Japan-Korea Green Steel Joint Seminar (co-sponsored by the Japan Iron and Steel Federation and Korea Iron and Steel Association)	

Please refer to the Policy Engagement section of the JFE Group Sustainability Report at [https://www.jfe-holdings.co.jp/en/sustainability/environment/climate/steel\\_industry\\_efforts/](https://www.jfe-holdings.co.jp/en/sustainability/environment/climate/steel_industry_efforts/) (scheduled to be published in November 2024)

# Management Foundation

To ensure sustained enhancement of corporate value, the JFE Group is strengthening its responsiveness to changes in the business environment. This section highlights the structure and initiatives in place to achieve this.

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# Management Organization

## Executive Structure (as of July 1, 2024)

### Directors



Nomination Committee Member  
Remuneration Committee Member

**Yoshihisa Kitano**  
Representative Director

Date of birth: February 20, 1958

1982 Joined Kawasaki Steel Corporation  
1982 Representative Director, President and CEO of JFE Steel Corporation, Representative Director of JFE Holdings, Inc.  
2024 Representative Director, President and CEO of JFE Holdings, Inc. (current post)

Mr. Kitano has abundant experience and knowledge required for management of the Group, which he has accumulated through his experience in operations in steelmaking technology and production control departments, and execution of duties as Corporate Officer such as supervision of steelworks and overseas business, corporate planning, and IT in JFE Steel Corporation.




Nomination Committee Member

**Masayuki Hirose**  
Representative Director

Date of birth: November 19, 1963

1986 Joined Kawasaki Steel Corporation  
2024 Representative Director, President and CEO of JFE Steel Corporation (current post), Representative Director of JFE Holdings, Inc. (current post)

Mr. Hirose has abundant experience and knowledge required for management of the Group, which he has accumulated through his experience in sales of steel products at JFE Steel and business management at Group companies, and execution of duties as Corporate Officer in management divisions such as corporate planning, general administration, and procurement.




Remuneration Committee Member

**Masashi Terahata**  
Representative Director

Date of birth: October 31, 1959

1982 Joined Kawasaki Steel Corporation  
2018 Representative Director and Executive Vice President of JFE Steel Corporation  
2019 Representative Director and Executive Vice President of JFE Holdings, Inc. (current post)

Mr. Terahata has abundant experience and knowledge required for management of the Group, which he has accumulated through his experience in operations such as general administration and legal departments in the Company as well as operations in human resource and labor administration departments, and execution of duties as Corporate Officer in management divisions such as accounting, finance, and procurement departments in JFE Steel Corporation.




**Toshinori Kobayashi**  
Director

Date of birth: December 19, 1957

1980 Joined Kawasaki Steel Corporation  
2016 Representative Director and Executive Vice President of JFE Steel Corporation  
2021 Representative Director, President and CEO of JFE Shoji Corporation (current post), Director of JFE Holdings, Inc. (current post)

Mr. Kobayashi has abundant experience and knowledge required for management of the Group, which he has accumulated through his experience in operations related to sales of automotive steel at JFE Steel Corporation, and supervising sales divisions as Corporate Officer.




**Kazuyoshi Fukuda**  
Director


Date of birth: March 1, 1962

1986 Joined Kawasaki Steel Corporation  
2024 Representative Director, President and CEO of JFE Engineering Corporation (current post), Director of JFE Holdings, Inc. (current post)

Mr. Fukuda has abundant experience and knowledge required for management of the Group, which he has accumulated through his experience in sales and engineering work related to water and sewage facilities at JFE Engineering, business management at subsidiaries of JFE Engineering, and execution of broad duties as Corporate Officer in promoting the recycling business and supervising overseas businesses.



### Audit & Supervisory Board Members



**Nobuya Hara**  
Audit & Supervisory Board Member

Date of birth: December 11, 1961

1984 Joined NKK Corporation  
2016 Audit & Supervisory Board Member of JFE Steel Corporation (current post)  
2017 Audit & Supervisory Board Member of JFE Holdings, Inc. (current post)

Mr. Hara has abundant experience and knowledge in finance and accounting that he has accumulated through operations related to corporate planning, accounting, and finance at JFE Steel Corporation as well as accounting operations at the Company. He also has abundant experience and knowledge gained through corporate management operations at the group companies of JFE Steel Corporation, in addition to duties as its Audit & Supervisory Board Member.




**Nakaba Akimoto**  
Audit & Supervisory Board Member

Date of birth: May 2, 1968

1991 Joined NKK Corporation  
2022 Audit & Supervisory Board Member of JFE Holdings, Inc. (current post), Audit & Supervisory Board Member of JFE Engineering Corporation (current post), Audit & Supervisory Board Member of JFE Shoji Corporation (current post)

Ms. Akimoto has abundant experience in properly designing and operating the Group's internal control systems and other operations through work in legal affairs of the Company and JFE Steel Corporation, the Group's core company. She also has insights as a lawyer in the State of New York, U.S. In addition, she is currently serving as an Audit & Supervisory Board Member of JFE Engineering Corporation and JFE Shoji Corporation. Based on such experience and knowledge, she is capable of accurately and fairly auditing the execution of duties by the Directors.



## Outside Executive Structure (as of July 1, 2024)

### Directors




Independent Executive  
Chairperson of  
Nomination Committee  
Remuneration Committee  
Member

**Masami Yamamoto**  
Director

Date of birth: January 11, 1954

Apr. 1976 Joined Fujitsu Limited  
Jan. 2010 Corporate Senior Executive Vice President of Fujitsu Limited  
Apr. 2010 President of Fujitsu Limited  
Jun. 2010 Representative Director and President of Fujitsu Limited  
Jun. 2015 Representative Director and Chairman of Fujitsu Limited  
Jun. 2017 Director and Chairman of Fujitsu Limited, Director of JFE Holdings, Inc. (current post)  
Jun. 2019 Director and Senior Advisor of Fujitsu Limited  
Jun. 2024 Retired

Independent Executive  
Nomination Committee  
Member

**Yoshiko Ando**  
Director

Date of birth: March 17, 1959

Apr. 1982 Joined Ministry of Labour  
Jul. 2013 General Manager, Workers' Compensation Division, Labour Standards Bureau of Ministry of Health, Labour and Welfare  
Jul. 2014 Director-General, Equal Employment and Child and Family Bureau of Ministry of Health, Labour and Welfare  
Oct. 2015 Director-General for Labour of Ministry of Health, Labour and Welfare  
Jun. 2016 Director-General for Statistics and Information Policy of Ministry of Health, Labour and Welfare  
Jul. 2017 Director-General for Human Resources Development of Ministry of Health, Labour and Welfare  
Jul. 2018 Retired from Ministry of Health, Labour and Welfare  
Jun. 2020 Director of JFE Holdings, Inc. (current post)

**Significant concurrent posts**

Outside Director of Kirin Holdings Company, Limited  
Outside Director of Sansei Technologies, Inc.




Independent Executive  
Chairperson of  
Remuneration Committee

**Keiichi Kobayashi**  
Director

Date of birth: June 24, 1959

Apr. 1985 Joined Furukawa Electric Co., Ltd.  
Apr. 2016 Representative Director and Corporate Executive Vice President, General Manager of Global Marketing Sales Division of Furukawa Electric Co., Ltd.  
Apr. 2017 President and Representative Director of Furukawa Electric Co., Ltd.  
Apr. 2023 Chairman of the Board of Furukawa Electric Co., Ltd. (current post)  
Jun. 2024 Director of JFE Holdings, Inc. (current post)

**Significant concurrent posts**

Chairman of the Board of Furukawa Electric Co., Ltd.  
Outside Director of NTT DATA Japan Corporation



### Audit & Supervisory Board Members



Independent Executive  
Remuneration Committee  
Member

**Isao Saiki**  
Audit & Supervisory  
Board Member

Date of birth: August 11, 1961

Apr. 1989 Admitted to the bar  
Apr. 1989 Joined Ginza Law Office (current Abe, Ikubo & Katayama Law Firm)  
Jan. 1998 Promoted to Partner Lawyer of Abe, Ikubo & Katayama Law Firm (current post)  
Apr. 2014 Audit & Supervisory Board Member of JFE Holdings, Inc.  
Jun. 2014 Retired as Audit & Supervisory Board Member of JFE Holdings, Inc.  
Jun. 2017 Audit & Supervisory Board Member of JFE Holdings, Inc. (current post)

**Significant concurrent post**

Partner Lawyer of Abe, Ikubo & Katayama Law Firm




Independent Executive  
Nomination Committee  
Member  
Remuneration Committee  
Member

**Tsuyoshi Numagami**  
Audit & Supervisory  
Board Member

Date of birth: March 27, 1960

Apr. 2000 Professor of Graduate School of Commerce and Management of Hitotsubashi University  
Jan. 2011 Dean of Graduate School of Commerce and Management of Hitotsubashi University  
Dec. 2014 Board Member and Executive Vice President of Hitotsubashi University  
Apr. 2018 Professor of Graduate School of Business Administration of Hitotsubashi University  
Jun. 2018 Audit & Supervisory Board Member of JFE Holdings, Inc. (current post)  
Apr. 2023 Professor of Institute for Business and Finance of Waseda University (current post)

**Significant concurrent posts**

Professor of Institute for Business and Finance of Waseda University  
Outside Director of Tokyo Century Corporation  
Outside Director of EBARA CORPORATION




Independent Executive  
Nomination Committee  
Member

**Takuya Shimamura**  
Audit & Supervisory  
Board Member

Date of birth: December 25, 1956

Apr. 1980 Joined Asahi Glass Co., Ltd. (current AGC Inc.)  
Jan. 2013 Senior Executive Officer and President of Electronics Company of AGC Inc.  
Jan. 2015 President & CEO of AGC Inc.  
Mar. 2015 Representative Director and President & CEO of AGC Inc.  
Jan. 2021 Representative Director & Chairman of AGC Inc.  
Mar. 2021 Director & Chairman of AGC Inc. (current post)  
Jun. 2022 Audit & Supervisory Board Member of JFE Holdings, Inc. (current post)

**Significant concurrent posts**

Director and Chairman of AGC Inc.  
Outside Director of EBARA CORPORATION



**Expertise and background**



Corporate management/  
Management strategy



Technology/DX



Internal control/  
Governance



Human resources man-  
agement and development



Sustainability/  
Environment



Finance/Accounting



Legal/Compliance



Sales/Marketing

Please see page 79 for skill matrix.

## Dialogue with Outside Executives

### Progress on Efforts to Enhance Corporate Value and Future Expectations



**Masami Yamamoto**  
Outside Director

Mr. Yamamoto joined Fujitsu Limited in 1976, where he served as president, chairman, and senior advisor. He has been a director of JFE Holdings since June 2017.



**Yoshiko Ando**  
Outside Director

Ms. Ando joined the Ministry of Health, Labour and Welfare in 1982 and retired in 2018 after serving as Director-General for Labour, Statistics and Information Policy, and Human Resources Development. She is currently an outside director of Kirin Holdings Company, Limited and an outside director of Sansei Technologies, Inc. She has been a director of JFE Holdings since June 2020.

**Q** Fiscal 2024 year marks the final year of the Seventh Medium-term Business Plan. How do you view the progress of key initiatives, particularly in the area of “establishing economic sustainability”?

**Yamamoto** The central theme of the Seventh Medium-term Business Plan is to create a resilient earnings structure that is not swayed by external factors by revising production systems and shifting from quantity to quality, moving away from a focus on production volumes in the past, in response to declining domestic demand in Japan and intensifying competition in overseas markets. I believe the steel business is making steady progress on this front, including significant cost reductions through the suspension of upstream processes at the Keihin district and hikes in selling prices. In Asia, current market conditions are quite challenging, owing to a surge in steel exports from China due to the downturn in the Chinese economy. Despite this, JFE is developing a structure capable of generating stable profits even in these adverse conditions. While the steel business might miss its segment profit target (¥230 billion) due to one-off impacts, the business expects to attain its per-ton profit target (¥10,000/ton). Moreover, both the engineering and trading businesses have shown improved

profitability compared to the previous medium-term business plan, with combined segment profits stabilizing around ¥70 billion, contributing to overall Group earnings.

**Shimamura** The suspension of upstream processes at the Keihin district has not only reduced fixed costs but also improved the operating rates of other facilities, allowing the entire Group to reassess its cost structure. In materials industries, a common strategy is to pursue economies of scale, so it is quite significant that JFE has pivoted away from this strategy. I also commend the Company's business development focused on regions and fields with growth potential, such as India, while staying committed to its strategy of shifting from quantity to quality in overseas business development

**Numagami** The introduction of the profit per ton metric in the steel business has spurred a shift in employees' mindsets, and I believe this is one reason why smooth progress has been made on the business plan.





**Isao Saiki**

Audit & Supervisory Board Member

Mr. Saiki was admitted to the bar in 1989 and joined Ginza Law Office (current Abe, Ikubo & Katayama Law Firm), where he has been a partner lawyer since January 1998. He has been an Audit & Supervisory Board Member of JFE Holdings since June 2017.



**Tsuyoshi Numagami**

Audit & Supervisory Board Member

Mr. Numagami became a professor of the Graduate School of Commerce and Management at Hitotsubashi University in 2000. He became a board member and executive vice president at the university in 2014. After serving as professor in the university's Graduate School of Business Administration, he assumed his present position as professor of Waseda University's Institute for Business and Finance in April 2023. He is also an outside director of Tokyo Century Corporation and an outside director of EBARA CORPORATION. He has been an Audit & Supervisory Board Member of JFE Holdings since June 2018.



**Takuya Shimamura**

Audit & Supervisory Board Member

Mr. Shimamura joined Asahi Glass Co., Ltd. (current AGC Inc.) in 1980. After serving as representative director, president & CEO of AGC, he assumed his present position as Director & Chairman in March 2021. He is also an outside director of EBARA CORPORATION. He has been an Audit & Supervisory Board Member of JFE Holdings since June 2022.

Of particular importance to economic sustainability is the shift to high-value-added products, such as electrical steel sheets and ultra-high-strength steel for automobiles. In addition to steadily increasing the ratio of high-value-added products in the steel business, JFE is building a solid overseas supply chain, including establishing a new processing base for electrical steel sheets in Serbia (Europe) in the trading business. In the steel industry, where investments



take time to recover, it is crucial that business strategies align with long-term trends. Although there has recently been headwinds against electric vehicles (EVs), I am confident that the trend toward vehicle electrification will continue, and JFE's strategy is well aligned in this direction.

Looking ahead, I am excited about the potential of the solutions business in the steel segment. JFE's steel business has accumulated voluminous manufacturing data, expertise, and other assets over many years. If JFE can transform these assets into a global business that offers cyber-physical systems (CPS) for manufacturing processes, it could become a significant source of future earnings. Especially with the advent of 6G communications, talented engineers in Japan could remotely manage overseas facilities in real time.

**Q** What is your opinion of the progress on efforts for the key initiative of “resolving social issues,” particularly in the context of safety, human resources, and human rights?

**Ando**

As outlined in the Seventh Medium-term Business Plan, the resolving of social issues is a factor that will weigh on JFE's future growth. For the steel and engineering businesses, which entail on-site work, creating a safe and inclusive work environment where diverse talent can thrive is essential from the perspective of securing human resources.

To prevent work-related injuries, the Company has taken diligent measures, such as incorporating employee safety-related indicators as non-financial metrics used to determine annual bonuses for executives since fiscal 2022. In the event of a major accident, the Board of Directors confirms an investigation of the cause and makes sure preventive measures are taken. Despite its best efforts, the Group has yet to eliminate fatal accidents, and needs to continue investing in safety measures.

I view efforts to further empower women as part of a broader effort to build an organization that embraces diverse human resources. The Company has set ambitious KPIs for the percentage of female managers and female recruits. To achieve these objectives, management formulates training plans aimed at promoting women to management positions and raises awareness through Diversity Month. However, the percentage of female managers and the number of female recruits remains low compared to men, and the turnover rate for women is still high, so management must continue efforts on this front.

A common element of both safety and diversity and inclusion (D&I) initiatives is the constant need to reassess existing systems, practices, and organizations from fresh perspectives. This spring, JFE Steel established a new Human Resources Strategy Headquarters I look forward to JFE Steel presenting a new vision along with the creation of a human resources strategy that aligns with the overall management strategy.

**Numagami**

As Ms. Ando mentioned, instilling D&I across the entire Company means that people must consider perspectives that differ from the conventional norms and ways of thinking, and this requires patience at times. While this may take time, it is crucial for each and every employee to build on successful experiences where they see that their diverse viewpoints and suggestions are effectively reflected in work practices and rules.

**Saiki**

Awareness of occupational safety and health has been increasing across the Company with each passing year, and since the start of the Seventh Medium-term Business Plan, major accidents have decreased in Japan. As a company with a global business presence, however, it is essential that the JFE Group is consistent in its approaches and standards for safety and health management not only in Japan but across overseas operations as well.



**Shimamura**

The same is true for human rights. The JFE Group has an extensive supply chain for its businesses, and it needs to further refine how it addresses human rights issues from a global perspective. JFE has already begun surveying conditions at overseas suppliers, and plans to also conduct these surveys at overseas Group companies. During the next medium-term business plan, I expect to see further progress in human rights due diligence.

Additionally, improving external messaging is another issue management should address. For example, the JFE Group makes a significant contribution to reducing CO<sub>2</sub> emissions in society, and should make a more concerted effort to communicate this benefit to the public.

In the past, companies in the materials sector have had a hard time figuring out ways to raise their profile due to their low visibility among general consumers. Lately, however, materials companies have had more opportunities to advertise themselves more prominently. In the world today, I believe it is increasingly important for materials manufacturers to proactively convey the ways in which their businesses contribute to society in order to elicit the interest of a wider range of stakeholders. The JFE Group has also been working to raise brand awareness through TV commercials and other means.

Especially among younger generations, there seems to be greater interest in the purpose of a company and the meaningfulness of their work. As the business environment continues to rapidly change, it is important for employees to understand how their work benefits the world, as this gives them more autonomy in fostering and accepting change. JFE should take various measures to help young employees, who are the future of JFE, feel a strong connection with the Company's purpose.

## Q What are your expectations for the JFE Group in terms of enhancing corporate value over the medium to long term, in light of the challenges and progress made on initiatives under the current medium-term business plan?

**Shimamura** From the perspective of carbon neutrality, the production and supply of steel places a heavy burden on the environment, but steel will always be an essential material for the world. I hope that the JFE Group will continue to pursue the value it provides to society through technological innovation.

Across the Group, in addition to the steel business, the engineering and trading businesses possess their own unique strengths through independent operating companies, while creating synergies together. Offshore wind power, a clean source of energy, is on the verge of rapid expansion in Japan. JFE Engineering has commenced operations of Japan's first monopile manufacturing factory at JFE Steel's West Japan Works. At the same time, the steel business is ramping up the production of heavy and large steel plates for monopiles at the West Japan Works (Kurashiki district), as the entire Group focuses efforts on commercializing this business. Through M&A and business alliances moving forward, I believe these synergies could be expanded into growth areas other than offshore wind power.

In addition, improving asset efficiency and redeveloping the Keihin district will be key factors in enhancing the Company's corporate value and also social value. As an Outside Audit & Supervisory Board Member, I will follow these developments with strong interest.

**Yamamoto** In the medium- to long-term, a key question is whether JFE can respond promptly to changing needs around the world. For example, needs are increasing for higher efficiency through the use of electrical steel sheets in EVs and transformers, and expectations are mounting for the production of monopiles essential in offshore wind power. Meeting these expectations will require significant investments. At the Board of Directors, we plan to discuss in detail how to ensure sufficient cash flow can be generated when funding becomes necessary for these investments.

The Board of Directors at JFE has a culture where members can have open, engaging discussions. Furthermore, the Board constantly reviews the criteria for agenda items, ensuring thorough debate on medium- to long-term issues. Lately, the focus has been on discussions about the long-term vision and the formulation of the Eighth Medium-term Business Plan, which is to be unveiled by the end of the current fiscal year.



**Ando**

What is needed going forward is the ability to assess what should be done now while keeping a long-term perspective in mind. It is a thorny challenge to devise solutions with a long-term view, especially in a business environment that is changing. Due to the nature of the steel business, initial investments are enormous, and it takes a long time to recover those investments. It is crucial to identify the key factors that could impact the Company, such as technological innovations, political and economic trends, and geopolitical risks, and understand how they might evolve, in order to set a course of action. The Board of Directors will continue to monitor and maintain a sound financial base for the JFE Group to ensure that long-term investments can be reliably carried out.

I look forward to having discussions about growth strategies from a long-term perspective as we work on the Eighth Medium-term Business Plan.

**Saiki**

While formulating the long-term vision and the next medium-term business plan, we must not forget the lessons learned from the Sixth Medium-term Business Plan. In the past, there was a strongly held belief that steelmakers had a social responsibility to ensure a sufficient supply of steel, and therefore prioritized the expansion of supply capacity. However, this approach did not always lead to profits, a key realization that informed the formulation of the Seventh Medium-term Business Plan. Now that steady progress is being made on the Seventh Medium-term Business Plan, I believe it is an opportune time to reflect on the past.

I am impressed with JFE's consistent efforts to reassess the current situation and improve, and I believe the Board will continue to have meaningful discussions about the future.

**Q** What initiatives have caught your attention in the context of achieving carbon neutrality by 2050?

**Numagami**

The steel industry is one of the industries where achieving carbon neutrality will be rather challenging. However, given that demand for steel will continue to increase as people pursue lifestyles of abundance around the world, it is clear that recycling scrap steel in electric arc furnaces alone will not be sufficient to meet this demand. Blast furnaces for steel production will still be needed. In this context, JFE is keenly working on the development of several ultra-innovative technologies, including carbon recycling blast furnaces and hydrogen steelmaking. While these innovations will take time, if these technologies can be translated into solutions businesses, JFE's contributions to reducing CO<sub>2</sub> emissions would be significant across the steel industry in Asia, where blast furnace steelmaking dominates. This would also present substantial business opportunities. From both a social contribution and profit driver perspective, I am extremely excited about the potential of JFE's ultra-innovative technologies.

In addition, the engineering business is well-positioned for future growth with ample business opportunities, as its core business activities contribute directly to CO<sub>2</sub> reduction, energy efficiency improvements, and greater recycling.

I also see business opportunities in the steel pipe business. Demand for steel pipes is increasing for use in natural gas extraction and transportation, and they are also used to pipe CO<sub>2</sub> underground, making this a promising growth area.

A future challenge for the JFE Group will be to develop a market and brand for green steel, even while the social infrastructure is not yet in place, such as for green electricity and hydrogen. There is a difference in the environmental value of green steel produced using the mass balance method and green steel produced with ultra-innovative technologies, and this may require distinct branding to avoid confusion. Ultimately, green steel must be something that consumers are willing to pay a premium for, and the entire steel industry, not just a single company, should think about how to create a market for green steel and establish a brand that reflects the value of green steel.

**Ando**

The Company's efforts to address climate change are progressing under the JFE Group Environmental Vision for 2050, and it is on track to achieving the target for an 18% reduction in CO<sub>2</sub> emissions in the steel business by the end of fiscal 2024 (compared to fiscal 2013). The construction of a prototype carbon recycling blast furnace is underway. Other initiatives, such as the high-efficiency large-scale electric arc furnace in the Kurashiki district and the Company's collaboration with Emirates Steel on low-carbon reduced iron, are also advancing steadily. With all these elements coming together, I am excited about the potential for more progress on the environmental front. With 2030 fast approaching, however, the transition period is closing. JFE must establish new technologies as quickly as possible and figure out how these elements will work together. I truly want to see how



JFE's world-leading technologies can make a meaningful contribution to society.

As I touched upon last year, my feelings and expectations have not changed about the carbon recycling blast furnace, green steel, and the engineering business. Last year, JFE launched its green steel under the JGreeX™ brand, and it has already been adopted in shipbuilding while also expanding into sectors such as building construction and electric power. Other steelmakers introduced similar products over the past year, and this increased exposure has raised social awareness of green steel, helping to create a market. I look forward to seeing how JFE differentiates and positions itself amid growing competition in this market. In offshore wind power, the JFE Group has established a solid platform. From the perspective of forming an industrial foundation in Japan, wind power will be a key aspect of this foundation, and I hope JFE continues to demonstrate its advantages in terms of technology and cost.

**Saiki**

Despite generating profits, steel companies, including JFE Steel, have not seen their share prices perform as hoped, probably because the market lacks confidence in the steel industry's ability to become carbon neutral. I believe this stems from the fact that the development of ultra-innovative technologies has yet to reach a breakthrough, and there are no concrete plans for the hydrogen, ammonia, and electric power infrastructure needed to support these ultra-innovative technologies. As I touched upon earlier, however, I think that JFE can generate more optimism on this front by externally communicating its deliberations and initiatives to address these challenges.

On infrastructure development, I understand that the JFE Group is working with the national government and other industries, but needs to communicate more effectively on challenges, like how to lower electricity costs. Without lower electricity costs, large-scale electric arc furnaces will not be viewed as cost competitive. Among the ultra-innovative technologies, I am particularly interested in JFE's carbon recycling

blast furnace, a proprietary technology. However, I feel that JFE has not adequately communicated the potential positive impact of this technology on the global steel industry. The engineering business is also advancing projects to reduce CO<sub>2</sub> emissions, such as waste-to-energy power

generation. I believe the JFE Group can more proactively communicate its position of leadership in the circular economy and showcase its competitive advantages to the world.

## Q Regarding the change in presidents in April 2024, could you elaborate on the selection process conducted by the Nomination Committee and give your thoughts on this process? Additionally, what are your expectations for the new management team?

**Yamamoto**  
(Chairperson)

Deliberations about nominating a new president were conducted in accordance with the internal rules set by the Nomination Committee. These internal rules stipulate that the current president proposes a succession plan to the committee, which then deliberates and submits its candidate recommendations for president to the Board of Directors. This transition had been discussed for several years, and after evaluating Mr. Kitano's track record as President of JFE Steel, he was recommended for the position. Additionally, as the Nomination Committee also plays a role in discussions of the new president at JFE Steel, Mr. Kitano's proposed succession plan was reviewed by the committee, which then recommended Mr. Hirose as the next president of JFE Steel. I am confident that the Nomination Committee made the right decisions about choosing these successors based on thorough discussions about candidates for both positions.

While JFE faces a variety of challenges, the new management team must see through its mission of generating enough profits so that the necessary investments can be made to address these challenges. As they formulate and implement a long-term vision and medium-term business plan, we will continue to closely monitor their progress to ensure JFE's value is elevated.

**Shimamura**

The Nomination Committee ensured a thorough assessment was made of not only the candidates' enthusiasm, career background, and other information through interviews but also our own observations. We considered their personality and management capabilities, and I believe we were able to find the right people for the job.

**Numagami**

At JFE, two Board of Directors' meetings each year are held at business sites instead of the head office. Through these opportunities, I have met many senior executives. In addition to the interviews by the Nomination Committee, I have had direct conversations with most of the executive officers who could be considered candidates, and this helps us decide who would be a suitable candidate.

**Ando**

The purpose of the Nomination Committee is to ensure fairness, objectivity, and transparency by including external perspectives. The committee was instrumental to the smooth selection process that Chairperson Yamamoto explained earlier.

In this increasingly uncertain environment, I expect President Kitano to steer the Group with strong leadership while spurring growth through Group synergies. Additionally, I expect him to build a foundation so the next generation inherits a stronger JFE.

### Message from the Newly Appointed Outside Director

## Contributing to Management with Perspectives on Both Manufacturing and Marketing

During my student years, I was captivated by the beauty of molten pure copper, which led me to study metallurgical engineering. Words of wisdom from my mentor, "*hakkei nao migakubeshi*" (meaning "even flawless jade can be polished," or even something seemingly perfect can benefit from additional improvement) and "fairness in one's dealings with others," have been a guiding principle throughout my life, especially during moments of self-reflection.

In 1985, I joined Furukawa Electric Co., Ltd., where I worked as a process researcher in copper metalworking, a technical and management lead in manufacturing operations, a manager responsible for basic cost reductions for the entire group, a business division head, and a director of sales. When I was president, I led the creation of Group Vision 2030 and fostered a culture of achieving milestones through backcasting from this vision, while shifting toward management focused more on capital efficiency.

Japan's share of global GDP has fallen from a peak of 18% in 1994 to 4% in 2023, a fact that gives me a strong sense of urgency. To revive Japan and set the country on a new path of growth, I believe that there is a pressing need for core industries to pivot to circular economy businesses while firing up the dual growth engines of "strengthening the industrial foundation by returning to the basics" and "commercializing innovations without fail." JFE Holdings, under the tagline "Sus-tetsu-nable,"\* is transitioning to circular economy businesses by advancing initiatives for 1) environmental sustainability, 2) efficient use of resources, 3) social responsibility, and 4) the creation of long-term economic value. This transition will not be easy and requires building an ecosystem in collaboration with resource recycling partners within a value chain centered on JFE.

I strongly resonate with JFE's corporate vision of "contributing to society with the world's most innovative technology" and its corporate values, "Challenging Spirit. Flexibility. Sincerity." Guided by this vision and values, JFE Holdings and its Group companies have been unwavering in their support of society by helping to resolve social issues. I am thrilled to be part of JFE Holdings, and I am eager to apply my management experience in both manufacturing and marketing to further enhance its corporate value.

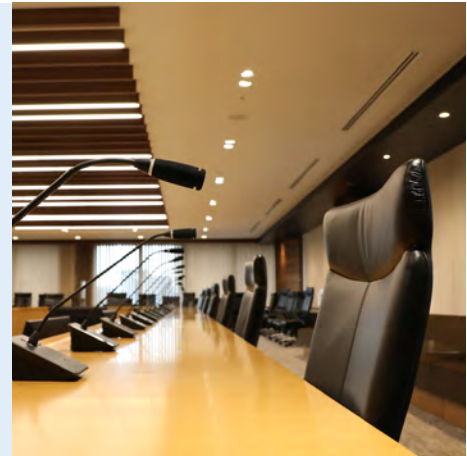


**Keiichi Kobayashi**  
Outside Director

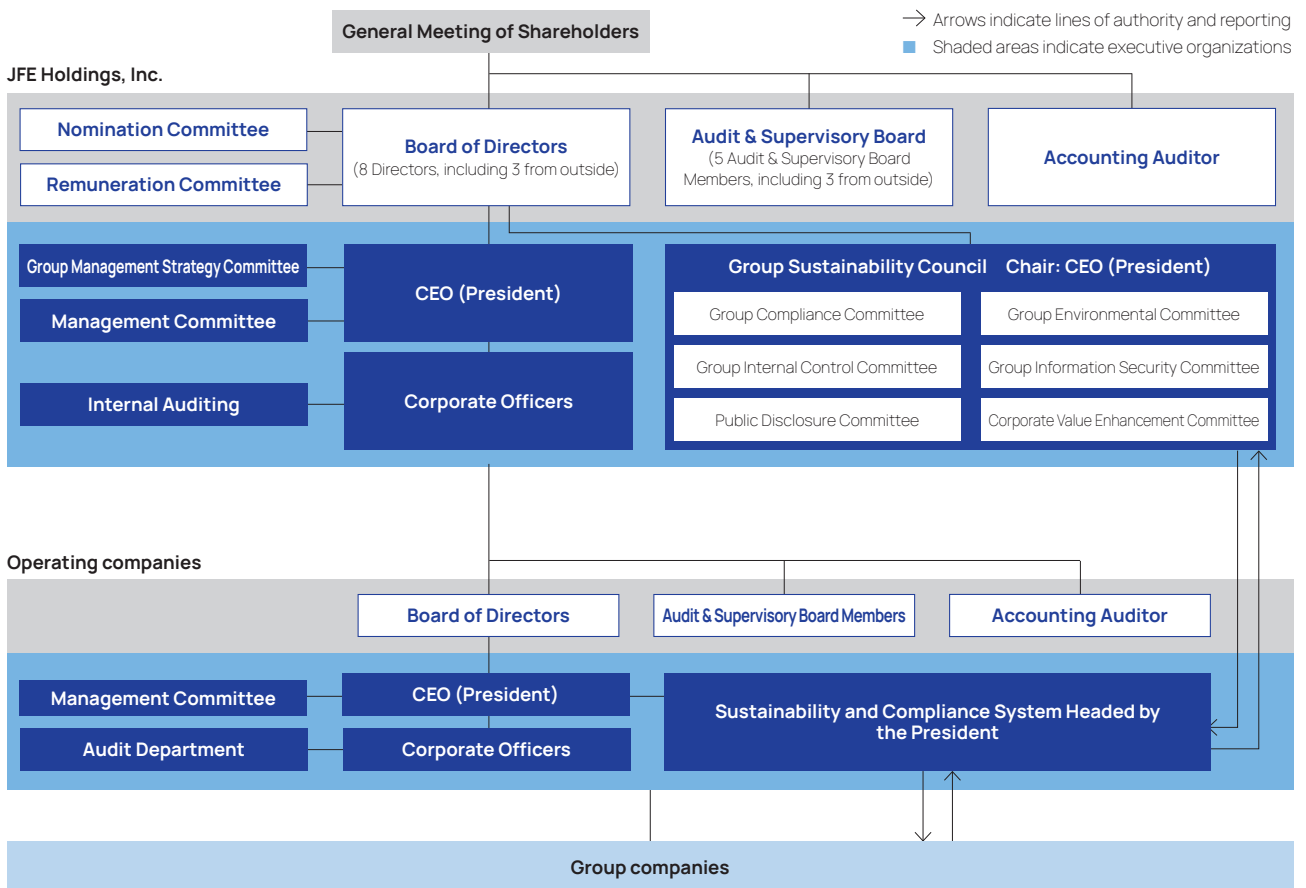
Appointed as Director  
of JFE Holdings in  
June 2024

# Corporate Governance

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.



## Corporate governance system



## Establishment of Basic Policy on Corporate Governance

The JFE Holdings, Inc. Basic Policy on Corporate Governance was established with the aim of pursuing the best practices in corporate governance in line with its corporate vision.

JFE Holdings, Inc. Basic Policy on Corporate Governance  
<https://www.jfe-holdings.co.jp/en/company/info/pdf/basic-policy.pdf>

Corporate Governance Report  
<https://www.jfe-holdings.co.jp/en/company/info/pdf/corporate-governance.pdf>

## Overview of the 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.

### Overview of the corporate governance system

Organizational design type	Company with an Audit & Supervisory Board
Number of Directors	8
Number of Independent Outside Directors	3
Number of female Directors	1
Number of Audit & Supervisory Board Members	5
Number of Independent Outside Audit & Supervisory Board Members	3
Number of female Audit & Supervisory Board Members	1
Term for Directors	1 year (The same for Outside Directors)
Corporate Officer system	Adopted
Voluntary advisory committees of the Board of Directors	Nomination Committee and Remuneration Committee

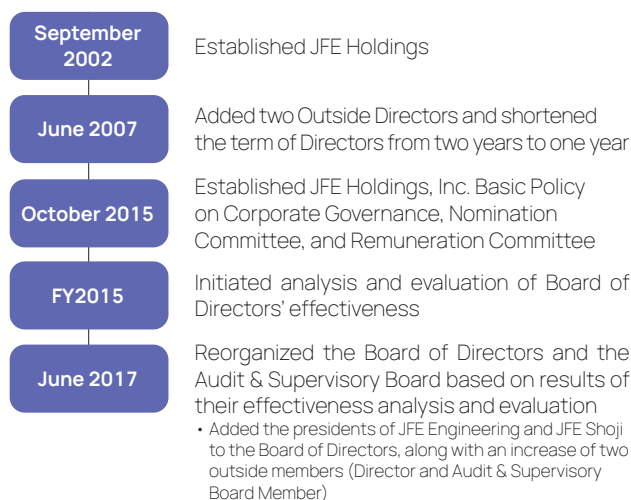
### Governance System

JFE Holdings and each operating company have their respective Audit & Supervisory Boards Members (Audit & Supervisory Boards). The companies are cross-checked by the Directors, who supervise operational execution, and the Audit & Supervisory Board Members, who conduct audits. Also, a Corporate Officer system separates decision-making and execution to clarify authority and responsibility, as well as to accelerate execution. JFE Holdings' Board of Directors is responsible for maintaining and enhancing management efficiency and passing resolutions as legally required, laying down key management policies and strategies and supervising operational execution. The Audit & Supervisory Board oversees management for the purpose of strengthening its soundness. In fiscal 2023, the Board of Directors deliberated about progress on the Seventh Medium-term Business Plan and initiatives related to sustainability issues.

Major topics discussed at the fiscal 2023 Board of Directors' meeting

- Progress on the Seventh Medium-term Business Plan
- Large-scale capital investment (expansion of electrical steel sheet production facilities, etc.)
- Overseas business expansion (joint venture in grain-oriented electrical steel sheet with JSW Steel in India, etc.)
- Initiatives to address ESG issues (carbon-neutral efforts, assessment and review of KPIs for important management issues, etc.)

### Major Initiatives to Strengthen the Governance System



### Appointment of Independent Outside Directors and Independent Outside Audit & Supervisory Board Members

We elect Independent Outside Directors so that one-third or more of the Directors are Independent Outside Directors. Independent Outside Directors will be elected from persons who are appropriate to bear the responsibility of strengthening governance, such as those who possess abundant experience as management in global enterprises or experts who possess profound knowledge and satisfy our independence standards. Currently, of the eight Directors, three are Independent Outside Directors.

Moreover, more than half of the Audit & Supervisory Board Members are from outside. Independent Outside Audit & Supervisory Board Members will be elected from persons who are appropriate to bear the role of enhancing the auditing function, such as those who possess abundant experience as management in global enterprises or experts who possess profound knowledge and satisfy our independence standards. Currently, of the five Audit & Supervisory Board Members, three are Independent Outside Audit & Supervisory Board Members.

Standards for Independence of Outside Directors/Audit & Supervisory Board Members of JFE Holdings, Inc.

<https://www.jfe-holdings.co.jp/en/company/info/pdf/independence.pdf>

### 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. One female Audit & Supervisory Board Member and one female Director have been appointed. The Company is working to enhance gender and global diversity mainly by electing Directors and Audit & Supervisory Board Members who possess a wealth of knowledge and experience as management in global enterprises. The Company will continue to systematically engage in initiatives to foster such human resources suitable for candidates for Directors and Audit & Supervisory Board Members by setting specific targets. We have identified skills for the Board of Directors that are necessary for the management of the Company, and arranged the main skills of each director and Audit & Supervisory Board member in a matrix, as follows.

## Management Foundation

## Corporate Governance

### Skill matrix of JFE Holdings' Directors and Audit & Supervisory Board Members (as of July 1, 2024)

Position/Name	Corporate management/ Management strategy	Sustainability/ Environment	Technology/DK	Finance/ Accounting	Internal control/ Governance	Legal/Compliance	Human resources management and development	Sales/Marketing	Expertise held in:	Independent executive	Nomination Committee	Remuneration Committee	FY2023 Board of Directors' attendance	FY2023 Audit & Supervisory Board attendance
Representative Director, President and CEO <b>Yoshihisa Kitano</b>	○	○	○		○				Steel Business		Member	Member	16/16 (100%)	—
Representative Director <b>Masayuki Hirose</b>	○	○			○			○	Steel Business		Member		—	—
Representative Director and Executive Vice President <b>Masashi Terahata</b>	○	○		○	○	○	○		Steel Business/ Trading Business			Member	16/16 (100%)	—
Director <b>Toshinori Kobayashi</b>	○	○	○		○			○	Steel Business/ Trading Business				13/16 (81%)	—
Director <b>Kazuyoshi Fukuda</b>	○	○	○		○			○	Engineering Business				—	—
Director <b>Masami Yamamoto</b>	○	○	○		○				—	○	Chair	Member	16/16 (100%)	—
Director <b>Yoshiko Ando</b>		○			○	○	○		—	○	Member		16/16 (100%)	—
Director <b>Keiichi Kobayashi</b>	○	○	○		○			○	—	○		Chair	—	—
Audit & Supervisory Board Member <b>Nobuya Hara</b>	○			○	○				Steel Business				16/16 (100%)	19/19 (100%)
Audit & Supervisory Board Member <b>Nakaba Akimoto</b>					○	○			Steel Business/ Engineering Business/ Trading Business				16/16 (100%)	19/19 (100%)
Audit & Supervisory Board Member <b>Isao Saiki</b>					○	○	○		—	○		Member	16/16 (100%)	19/19 (100%)
Audit & Supervisory Board Member <b>Tsuyoshi Numagami</b>	○			○	○			○	—	○	Member	Member	16/16 (100%)	19/19 (100%)
Audit & Supervisory Board Member <b>Takuya Shimamura</b>	○	○			○			○	—	○	Member		16/16 (100%)	19/19 (100%)

### Nomination Committee and Remuneration Committee

In October 2015, the Company set up the Nomination Committee and the Remuneration Committee as advisory bodies to the Board of Directors to secure fairness, objectivity, and transparency in the appointment of and remuneration for Directors and Audit & Supervisory Board Members. For both committees, the majority of committee members are Outside Directors/Outside Audit & Supervisory Board Members and the chairs are chosen from among these people.

The Nomination Committee deliberates and reports to the Board of Directors on matters pertaining to the basic stance on the election and dismissal of the President of the Company, proposals for the election of candidates for the President of the Company, succession plans of the President of the Company, and the nomination of candidates for Outside Directors/Outside Audit & Supervisory Board Members. Six meetings were held in fiscal 2023. All committee meetings had 100% attendance rates. The Remuneration Committee deliberates matters pertaining to the basic stance on the remuneration of Directors, etc., of the Company and each operating company and reports to the Board of Directors. Three meetings were held in fiscal 2023. All committee meetings had 100% attendance rates.

#### Nomination Committee and Remuneration Committee structure (as of July 1, 2024)

Committee	Inside Directors	Outside Directors	Outside Audit & Supervisory Board Members	Chair
Nomination Committee	2	2	2	Masami Yamamoto (Outside Director)
Remuneration Committee	2	2	2	Keiichi Kobayashi (Outside Director)

### Support for Directors and Audit & Supervisory Board Members

Directors and Audit & Supervisory Board Members are provided with opportunities and funding to receive training in legal matters, corporate governance, risk management, and other subjects that help them fulfill their roles and duties.

In addition, a briefing is held for Outside Directors and Outside Audit & Supervisory Board Members prior to Board of Directors' meetings.

Furthermore, Outside Directors and Outside Audit & Supervisory Board Members are provided with relevant information and opportunities to exchange opinions with the President of the Company and other top managers, attend key hearings on the operational status of individual departments, and inspect business sites and Group companies within and outside Japan.

### Evaluation of Effectiveness of the Board of Directors

At JFE Holdings, the effectiveness of the Board of Directors is evaluated based on the Basic Policy on Corporate Governance. In fiscal 2023, all Directors and Audit & Supervisory Board Members answered a revised questionnaire about effectiveness. In addition, the outcome of initiatives in fiscal 2023 were examined while referencing the opinions and suggestions received from the fiscal 2022 analysis and evaluation.

Based on the results of the questionnaire and evaluation by the third-party organization, the Board of Directors determined that its overall effectiveness has been ensured through invigorated discussions facilitated by thorough preliminary briefing sessions attended by all Outside Directors/Outside Audit & Supervisory Board Members, and by appropriate direction by the chairperson.



## Fiscal 2023 initiatives based on effectiveness evaluation results through fiscal 2022

- In addition to reviewing KPIs related to diversity, inclusion, and talent development, and discussing the Employee Awareness Survey conducted in the past, the results of the engagement survey and related measures were reported to the Board of Directors, which served to enhance discussions of human capital management.
- Progress on initiatives toward carbon neutrality and human rights due diligence was reported to the Board of Directors, facilitating the monitoring of progress and discussions on future challenges. Additionally, the Board received reports on risk management and sustainability issues, such as the Group's business continuity plan (BCP) efforts and biodiversity initiatives and policies, further enhancing discussions on these topics.
- Reporting was augmented with risk information and management challenges at operating companies and Group companies. To further instill compliance awareness and prevent the materialization of risks, the frequency of corporate ethics awareness surveys was changed to allow more timely identification of issues.

Furthermore, audits of the Directors' execution of duties were carried out appropriately and impartially by the Audit & Supervisory Board Members. In addition, discussions were invigorated at meetings of the Board of Directors by the proactive exchange of opinions and posing of questions by Audit & Supervisory Board

Members with regard to decision-making and reporting processes. This demonstrates that JFE Holdings is functioning effectively as a company with an Audit & Supervisory Board.

The following issues were identified in the survey as areas where effectiveness can be improved further.

### Issues to further improve effectiveness

- The Board should examine the Group's vision and long-term strategy to achieve sustainable growth, and have more in-depth discussions on important management issues, including human resource management and respect for human rights.
- The Board should organize its agenda with an eye on accelerating decision-making while maintaining supervisory functions from the standpoint of improving corporate value, and continue to examine the governance system, including ways to enhance diversity.
- The Board should continue to examine methods of enhancing reporting to the Board of risk information, including that related to subsidiaries and affiliates, in order to reinforce Groupwide risk management.

In fiscal 2024, JFE aims to increase opportunities to exchange opinions with managers of operating companies, by examining the implementation of supervision of business sites within and outside Japan, and holding meetings of the Board of Directors at domestic

business sites. In light of these points, we will continue to proactively implement measures to improve the effectiveness of the Board of Directors, with the ultimate aim of increasing the corporate value of the JFE Group.

## Operating System

### Key Decision-making

JFE companies are responsible for business decisions in accordance with their respective rules and procedures, whereas JFE Holdings makes final decisions about Groupwide matters. Each operating company determines key matters through a deliberative process by its own Management Committee and Board of Directors. In April 2017, JFE Holdings changed the operating structure of key

committees. Management strategies involving the entire Group are now deliberated by the Group Management Strategy Committee, and core issues of JFE Holdings, the operating companies, and the Group are deliberated by the Management Committee before they are submitted to the Board of Directors for resolution.

### Structure of Group Management Strategy Committee and Management Committee

Committee	Company	Chairperson	Attendees
Group Management Strategy Committee	JFE Holdings	President	Inside Directors (including 3 operating company Presidents), Corporate Officers, and full-time Audit & Supervisory Board Members
Management Committee	JFE Holdings	President	Inside Directors (excluding 3 operating company Presidents), Corporate Officers, and full-time Audit & Supervisory Board Members
	Each operating company	President	Directors, major Corporate Officers, and Audit & Supervisory Board Members

## Executive Remuneration

Executive remuneration is based on the Basic Policy on Remuneration for Directors and Corporate Officers and the Policy for Deciding Individual Remuneration for Directors and Corporate Officers, which were formulated based 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 Audit & Supervisory Board Members, for an amount within the total limit approved at the General Meeting of Shareholders.

### Executive remuneration (fiscal 2023)

Position	Total remuneration (thousand yen)	Total by type of remuneration (thousand yen)				Number of executives
		Basic remuneration	Bonuses	Stock remuneration		
				Performance-linked portion	Service length portion	
Directors (excluding Outside Directors)	320,247	217,415	61,840	27,328	13,664	5
Audit & Supervisory Board Members (excluding Outside Audit & Supervisory Board Members)	78,335	78,335	—	—	—	2
Outside Directors/Outside Audit & Supervisory Board Members*	106,697	106,697	—	—	—	6

**Basic Policy on Remuneration for Directors and Corporate Officers**

- The Board of Directors shall determine a 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 the Policy for Deciding Individual Remuneration for Directors and Corporate Officers**

- Remuneration for Directors 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 Company's 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.
- 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 has been set so that when performance targets are achieved the ratio is "basic remuneration : annual bonus : stock remuneration = 60% : 20% : 20%."

The Company pays only basic remuneration to Outside Directors and Outside Audit & Supervisory Board Members given their respective roles of supervising and auditing management from an independent and objective standpoint. Annual bonuses and stock remuneration are not paid by the Company to Directors who concurrently serve as executive directors of operating companies. Performance-linked remuneration is calculated as follows.

**Annual bonus**

The annual bonus is calculated by multiplying the total amount of segment profit in a single fiscal year and an employee safety-related indicator and climate change-related indicators, as a performance-linked indicator, by the degree of achievement of the indicator and a preset coefficient for each position.

For non-financial indicators, JFE introduced an employee safety-related indicator in fiscal 2022 and climate change-related indicators in fiscal 2023.

The employee safety-related indicator is calculated as the achievement rate for zero workplace fatalities and the lost-work injuries rate, which are KPIs set for each operating company. Climate change-related indicators are calculated as the achievement rate for a selection of metrics related to contributions to resolving climate change issues (initiatives to realize carbon neutrality by 2050), which is a KPI set for each operating company. (Please see the chart.)

In the event that a Director or Corporate Officer is dismissed or

found to have engaged in illegal behavior, by resolution of the Board of Directors, the Director or Corporate Officer will lose the right to receive payments. In the event that a Director who has already received payment is found to have engaged in illegal behavior, by resolution of the Board of Directors, the Company can demand the Director or Corporate Officer to return economic value equivalent to the stock remuneration that they had received.

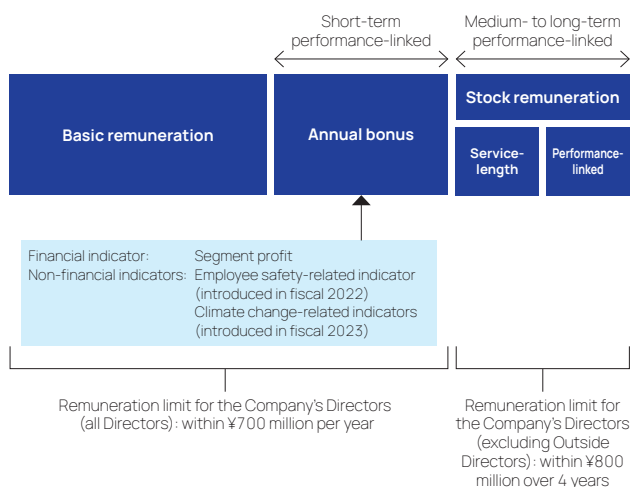
**Stock remuneration**

The stock remuneration plan is determined in accordance with the performance targets, etc., in the Group's medium-term business plan. For the period between fiscal 2021 and fiscal 2024, the payment level is determined according to the level of achievement of the target profit attributable to owners of parent of ¥220.0 billion per year, set under the Seventh Medium-term Business Plan. Furthermore, 5% or more ROE is the minimal requirement for the payment.

In the event that a Director or Corporate Officer is dismissed or found to have engaged in illegal behavior, by resolution of the Board of Directors, the Director will lose the right to receive payments. In the event that a Director who has already received payment is found to have engaged in illegal behavior, by resolution of the Board of Directors, the Company can ask the Director or Corporate Officer to return economic value equivalent to the stock remuneration that they had received.

The JFE Group aims to have a Director compensation system that functions as a healthy incentive to pursue sustainable growth, and continues to review the system at meetings of the Remuneration Committee and the Board of Directors.

**Design of the remuneration plan for Directors**



**Conversion rates**

**(achievement of climate change indicators)**

	KPI		
JFE Steel's Board Members	Degree of achievement in CO <sub>2</sub> reduction target by conserving energy and developing technology (75%)		Degree of achievement in market introduction and uptake target for eco-friendly products and technologies (25%)
JFE Engineering's Board Members	Degree of achievement in target for reducing own CO <sub>2</sub> emissions (25%)	Degree of achievement in target for contributing to CO <sub>2</sub> reductions (75%)	
JFE Shoji's Board Members	Degree of achievement in target for reducing own CO <sub>2</sub> emissions (100%)		
JFE Holdings' Board Members	JFE Steel's degree of achievement (70%)	JFE Engineering's degree of achievement (20%)	JFE Shoji's degree of achievement (10%)

\* Excludes Outside Directors

\* Weighted average of degree of achievement at each operating company

## Internal Control

The JFE Group's internal control system, in accordance with the Basic Stance for Building an Internal Control System, is maintained through various committee regulations including the Rules of the Board of Directors, Regulations for the Group Management Strategy Committee, Regulations for the Management Committee, Regulations for the JFE Group Sustainability Council, Regulations for the Organization and Operations, Regulations for Document Management, Regulations for Addressing Violence Directed at Companies, and installation of the Corporate Ethics Hotline. The Basic Stance for Building an Internal Control System is revised and improved from time to time to boost sustainable corporate value.

Basic Policies to Establish the Internal Control Systems  
<http://www.jfe-holdings.co.jp/en/company/info/pdf/corporate-governance.pdf>

### Strengthening Internal Control

#### Internal audits

JFE Holdings, the operating companies, and key Group companies had internal audit organizations comprising 168 people as of April 1, 2024. These organizations share information to enhance overall auditing within the Group. Moreover, to ensure the effectiveness of internal audits, the results of internal audits are reported to the Board of Directors and the Audit & Supervisory Board.

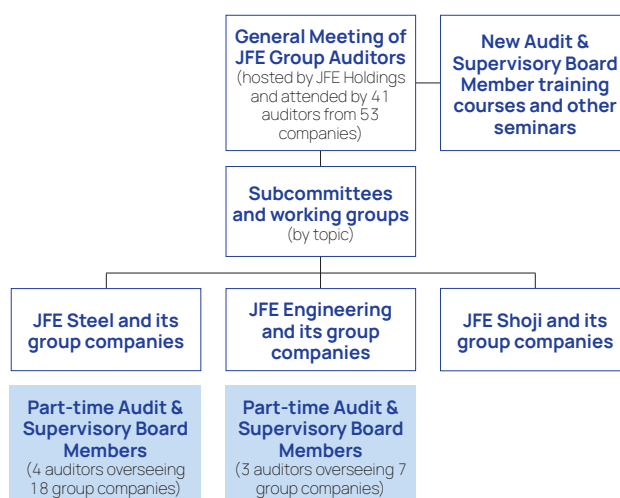
#### Audits by Audit & Supervisory Board Members

Audit & Supervisory Board Members attend meetings of the Board of Directors, Group Management Strategy Committee, Management Committee, and Group Sustainability Council, as well as other important meetings, and express their opinions as needed. To audit how Directors execute their responsibilities, they conduct hearings with Directors and Corporate Officers regarding operational status and receive operational reports from subsidiaries. In addition to undergoing statutory audits, JFE companies take the following initiatives to improve the effectiveness of internal auditing by the Audit & Supervisory Board Members, through efforts to share information and strengthen coordination among the Members.

A total of 34 full-time Audit & Supervisory Board Members have been appointed to 29 companies, including JFE Holdings. Operating company personnel are dispatched to Group companies as part-time Outside Audit & Supervisory Board Members. Each absentee Audit & Supervisory Board Member serves one to five subsidiaries to raise the quality of the audits by their Audit & Supervisory Board Members and enhance Group governance. Seven absentee Audit & Supervisory Board Members served 25 companies in total.

The JFE Group Board of Auditors includes both full-time Audit & Supervisory Board Members of each Group company and part-time Audit & Supervisory Board Members. 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 audits.

#### Structure of JFE Group Board of Auditors



#### Cooperation between Audit & Supervisory Board Members and the Accounting Auditor

In fiscal 2023, the Audit & Supervisory Board Members held eight scheduled or unscheduled meetings with Ernst & Young ShinNihon LLC, JFE's outside accounting auditor, in which the latter presented its audit plan, completed work, and detailed results. The firm also presented a detailed explanation of its quality management system to confirm its validity. In turn, the Audit & Supervisory Board Members explained their own audit plans and other matters to the firm. The two sides also shared opinions on related matters.

#### Cooperation between Audit & Supervisory Board Members and the internal auditing department

In fiscal 2023, the Audit & Supervisory Board Members held 10 scheduled or unscheduled meetings with the internal auditing department, in which the latter presented its internal audit plan, work status, and detailed results. During the meetings, the Audit & Supervisory Board Members also shared opinions with the department.

#### Operating company governance

Some Directors, Corporate Officers, and Audit & Supervisory Board Members of JFE Holdings serve concurrently as the 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 managerial policies of subsidiaries.

## Policy on Listed Subsidiaries and Listed Affiliates

### (1) Significance of listed subsidiaries and listed affiliates as a policy and approach to Group management

As the Company practices its corporate vision 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. Among this group of companies, JFE Steel Corporation, a subsidiary of JFE Holdings, has a listed subsidiary (JFE Systems, Inc.) and four listed affiliates (GEOSS Corporation, Shinagawa Refractories Co., Ltd., Nippon Chuzo K.K., and Nippon Chutetsukan K.K.), described below.

For the listed subsidiary, parent JFE Steel pursues an optimal structure depending on the relevance in terms of business. The decision to list the subsidiary was based on a comprehensive evaluation that concluded it was necessary for its growth and for enhancing the overall value of the Group, while considering the advantages of being listed, such as the subsidiary's visibility and credibility in fundraising, sales, and personnel recruitment.

Regarding the listed affiliates, the decision to list these companies was similarly made to strengthen competitiveness, and to improve visibility and credibility in fundraising, sales, and personnel recruitment. JFE Steel retains partial ownership in these four companies to take advantage of benefits that include exchanges of technologies and personnel related to steel manufacturing. The significance of holding shares in these companies is detailed in "Corporate Governance Report Chapter 1, Section 5: Other Matters that May Significantly Affect Corporate Governance."

The five aforementioned companies are subject to rules different from those applicable to other consolidated subsidiaries and affiliates, in light of guidance concerning listed subsidiaries from the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange. Each of the companies conducts autonomous corporate activities exercising autonomy and flexibility. Their management independence as listed companies is ensured through the establishment of special committees comprised of independent people, including Independent Outside Directors, and the nomination of

Outside Directors who are independent of each company, JFE Steel, and JFE Holdings. The interests of the said subsidiaries' and affiliates' shareholders, other than the said subsidiaries, affiliates, and the Company, will not be unfairly impaired. The autonomous management decisions of each company is respected regarding the calibration and distribution of business opportunities and business fields among the listed subsidiaries and listed affiliates, except in instances where such decisions could have a serious impact on the consolidated financial statements of the Company.

With regard to capital procurement and management, each company makes independent decisions based on their respective financial strategies. The Company receives funds from listed subsidiaries, but decisions are logically made with respect to terms in business transactions, based on market interest rates.

In addition, 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 companies.

### (2) Policy regarding ensuring effectiveness of governance systems at listed subsidiaries and listed affiliates

Each company independently drafts proposals regarding the nomination of executives, and JFE Steel respects the independence of these companies and the decisions made by their respective nomination committees. JFE Steel exercises its voting rights with the goal of enhancing each company's medium- to long-term corporate value.

Additionally, JFE Holdings and JFE Steel may recommend certain candidates for Director for the purpose of maximizing the benefits of technological and personnel exchanges with these companies.

JFE Holdings regularly reviews the rationale for having its subsidiaries listed and confirms these considerations with the Board of Directors, taking necessary actions as appropriate. This matter was discussed and reviewed at the Board of Directors' meeting held in May 2024.

## Basic Policies for Strategic Shareholdings and Exercise of Related Voting Rights

All shares held by the Company are the shares of subsidiaries or affiliates. The Company's wholly owned subsidiaries as well as operating companies, JFE Steel Corporation, JFE Engineering Corporation, and JFE Shoji Corporation (hereinafter the "Operating Companies"), do not hold listed shares as strategic shareholdings, in principle. Strategic shareholdings, however, are allowed as an exception when holding the stocks of a company is determined to be necessary for maintaining and achieving growth for the Group's business.

The Board of Directors' meetings regularly confirm the significance of the strategic shareholdings and whether the benefits and risks of such holdings are commensurate with their capital cost, and sell strategic shareholdings if there is no significance of such shareholdings or there is a risk of damage to shareholders' interest. In fiscal 2023, the Company sold ¥21.6 billion (on a market value basis) worth of all or parts of 16 stocks. Furthermore, the Board of Directors periodically examines the significance of its strategic shareholdings and return on investment.

The exercise of voting rights of strategic shareholdings is

decided upon reviews by the 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 and accounts for the majority of the shares for investment purposes posted in the consolidated financial statements of the company, those shares of JFE Steel that are held for purposes other than pure investments are shown below.

	End of FY2020	End of FY2021	End of FY2022	End of FY2023
Number of issues	171	146	138	127
Total balance sheet amount (billion yen)	960	712	590	608

# Thorough Compliance

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. Therefore, JFE believes it is extremely important that all members of the organization deepen their knowledge and awareness of compliance and perform their jobs accordingly.



## Compliance System

The JFE Group's Standards of Conduct guides 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. The Compliance Committee, chaired by the President of JFE Holdings, generally convenes four times a year to deliberate basic policies and issues and then supervise their implementation. Each operating company has a similar in-house system for promoting and supervising compliance.

JFE Group's Standards of Conduct <https://www.jfe-holdings.co.jp/en/company/philosophy/guideline.html>

## Ensure Adherence to Corporate Ethical Standards and Compliance

### Thorough Compliance

As a part of initiatives to enhance awareness of compliance, the JFE Group has compiled a Compliance Guidebook and distributed it to executives and employees (domestic and overseas), to be used in activities such as collation, to ensure that the rules are fully communicated and informed.

Compliance  
<https://www.jfe-holdings.co.jp/en/sustainability/governance/compliance/>

### Whistleblowing System

We have established a Corporate Ethics Hotline to maintain corporate ethics, comply with laws and regulations, and prevent corruption. It is accessible to all executives and employees of the JFE Group (employees, contract workers, part-time workers, temporary staff, and retirees) as well as the executives and employees of business partners. As a specific means of reporting and consultation, an environment has been prepared for receiving inquiries (it is also possible to anonymously file reports and seek consultation) by email, a dedicated phoneline, and by regular mail. Additionally, an external hotline to a law firm is also provided. Whistleblowing and requests for consultation are regularly reported to full-time Audit & Supervisory Board Members. Moreover, the operational status of the system is monitored by the Board of Directors.

### Cases handled by the Corporate Ethics Hotline

Company	End of FY2020	End of FY2021	End of FY2022	End of FY2023
JFE Holdings and operating companies	87	133	127	134

### Compliance with the Antimonopoly Act

We take past violations of the Antimonopoly Act seriously and continue to implement thorough measures to eliminate the possibility of future infringements. Moreover, initiatives to prevent a reoccurrence in the future are reported to the Group Compliance Committee with the objective of enhancing their effectiveness.

### Preventing Corruption and Bribery

We do 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 resort to these illegal activities to gain profit or resolve problems. Based on these thoughts, the Group issued the JFE Group's Basic Policy on Preventing Bribery of Public Officials and disseminates it throughout the Group including operating companies. The JFE Group also maintains various systems to prevent the bribery of public officials.

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

In accordance with the JFE Group's Standards of Conduct, the JFE Group complies with the letter and respects the spirit of the tax laws of each country where it operates, as well as international rules and guidelines on taxation, such as those published by the Organisation for Economic Co-operation and Development (OECD). The Group ensures timely, appropriate, and fair payment of taxes in each country where it conducts business.

Additionally, the JFE Group refrains from engaging in tax planning aimed at tax avoidance or utilizing tax havens. By enhancing transparency, the JFE Group strives to build trusting relationships with tax authorities in each country.

### Resisting Organized Crime

We declare in our Standards of Business Conduct that we will firmly resist all antisocial forces, and have established the JFE Group Policies for Addressing Antisocial Forces and Regulations for Addressing Violence Directed at Companies to clarify the measures to be taken in response to any issues against antisocial forces, including manuals for initial responses to violence against the Group.

### Confirmation and Improvement through the Employee Awareness Survey

We regularly conduct Employee Awareness Surveys of executives and employees of JFE Holdings and operating companies for the purpose of assessing the degree of understanding in the Group's Corporate Vision, Corporate Values, and Standards of Conduct.

# Risk Management

Based on its corporate vision of “contributing to society with the world’s most innovative technology,” the JFE Group maintains and actively uses a risk management structure to accurately identify and respond to Groupwide risks, with the aim of sustaining growth and improving corporate value across the Group.



## Risk Management System

JFE Holdings is responsible for comprehensive risk management in accordance with its Basic Stance for Building an Internal Control System. A structure has been put into place for the Board of Directors to supervise risk management and verify its effectiveness. The JFE Group Sustainability Council, chaired by the President of JFE Holdings, verifies, evaluates, deliberates, and decides issues related to policy and actions plans for risk management.

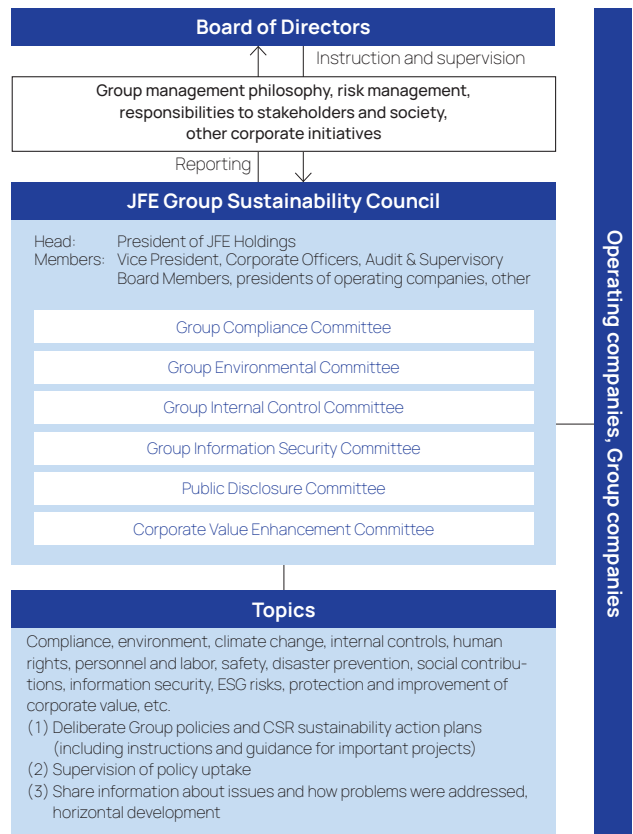
Specifically, adherence to Company policies and rules are monitored, such as for business activities, compliance, and the corporate vision. It also supervises Corporate Officers responsible for the environment, climate change, personnel and labor, safety, disaster prevention, preventing human rights violations, such as sexual and power harassment, quality management, financial reporting, information security, ESG risks, and other risks.

The Board of Directors regularly receives reports on Group policies and action plans for risk management, and discusses and decides on important matters related to risk management in its role of supervising and verifying the effectiveness of risk management.

The Company intends to continuously improve Groupwide risk management in light of deliberations by the Board of Directors.

Risk Management  
<https://www.jfe-holdings.co.jp/en/sustainability/governance/risk/>

## Sustainability promotion structure



## Response to Major ESG Risks

### Response to Climate Change Risks

The JFE Group has formulated the JFE Group Environmental Vision for 2050, which plots a path for becoming carbon neutral by 2050, and positions climate change initiatives as the highest priority for management. Initiatives in the Seventh Medium-term Business Plan call for reducing CO<sub>2</sub> emissions by 18% compared with the fiscal 2013 level by fiscal 2024 in the steel business, and reducing CO<sub>2</sub> emissions by 30% or more compared with the fiscal 2013 level by the end of fiscal 2030, while plotting out multiple avenues to attaining carbon neutrality by 2050.

Risks are identified and evaluated based on a scenario analysis conducted under the framework recommended by the Task Force on Climate-related Financial Disclosures (TCFD), and important factors that may affect management are selected for further analysis and used in formulating business strategies, including the Seventh Medium-term Business Plan.

● Please see page 48 for details on TCFD-based information disclosure and risk management.

## Intellectual Property Management

The JFE Group ensures the proper management of intellectual property in various aspects of its business activities. To prevent infringement of third-party intellectual property rights, the Group monitors the latest information related to intellectual property relevant to its operations and takes necessary measures.

● Please see page 41 for details on intellectual property activities.

## Privacy Protection

JFE has established the JFE Group Privacy Statement for managing information including "My Numbers," which are personally identifiable numbers under Japan's social security and tax number systems. 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 the applicable laws of each country related to businesses and guidelines.

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 cyberattacks 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.

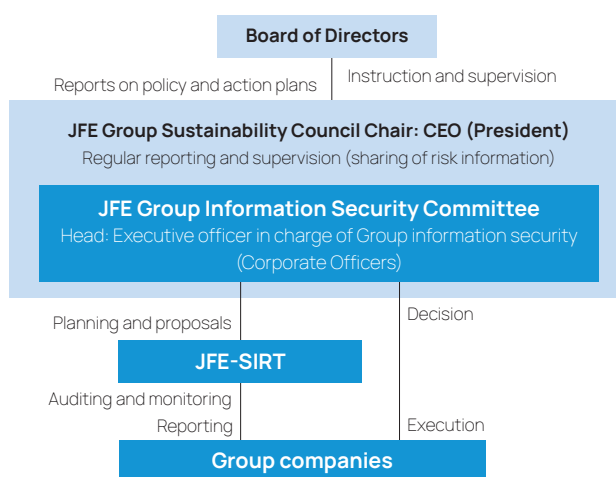
The JFE Group Information Security Committee deliberates important matters related to IT, especially information security, and decides policy.

Based on 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.

JFE Cyber Security & Solutions, Ltd. was established in April 2024 with the objective of recruiting and training advanced security personnel, in addition to strengthening the security monitoring system.

\* JFE Security Integration and Response Team, established in April 2016

## JFE Group's frameworks for digital technology, corporate governance and cybersecurity



## JFE Group's BCP Framework

The JFE Group has formulated a business continuity plan (BCP) to prepare for crises such as natural disasters, including typhoons and large-scale earthquakes, as well as the rapid spread of infectious diseases like influenza. The Group implements various measures, including regular drills, to ensure readiness.

### Response to Large-scale Natural Disasters

The JFE Group has designated evacuation locations in the event of a tsunami, maintains a Companywide system for sending out guidance and instructions during communications controls and power blackouts, and regularly backs up all of its data. The Company is reinforcing its water removal facilities in steelworks in response to the increasingly severe typhoons and torrential rainfalls in Japan over the past few years.

### Response to Infection

The JFE Group has created a policy for responding to a novel influenza outbreak and keeping important operations running, including at steelworks and production sites. JFE Steel also conducted operational simulations for the event that a local outbreak increased the ratio of employees missing work, and took various other steps as conditions changed. We periodically inspect and review this policy in meetings of the JFE Group Sustainability Council, for example. Moreover, to protect employees from the threat of infectious diseases, we encourage employees stationed overseas and their immediate families, as well as employees on overseas business trips, to get recommended vaccinations and health checkups when necessary. We provide employees with safety information and data on infectious diseases in each country, and implement safety measures, such as restrictions on overseas travel, depending on the situation.

# Respect for Human Rights

The JFE Group support and respects 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 Labour 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.



## Promoting Human Rights

In order to steadily work on human rights initiatives, the JFE Group Sustainability Council, chaired by the President of JFE Holdings, formulates Groupwide policy and periodically reports to the Board of Directors, which provides instructions and supervision. As well, we established the JFE Group Human Rights Promotion Council, chaired by a corporate officer of JFE Holdings, under the JFE Group Compliance Committee, chaired by the President of JFE Holdings. This framework allows us to share information with departments responsible for human rights issues that have been set up at each operating company.

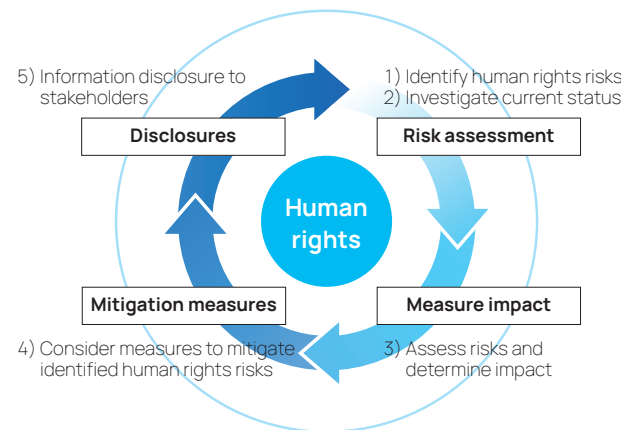
In addressing all kinds of human rights risks, we emphasize communicating with stakeholders through such initiatives as

setting up a Corporate Ethics Hotline at not only each operating company but also an external hotline to an independent law office, and dedicated consultation desks on harassment issues at major offices, to ensure people can anonymously report issues and seek consultation. Additionally, external stakeholders are able to use an online form to ask questions about human rights problems and other compliance issues (this can be done anonymously as well). The Board of Directors and the JFE Group Sustainability Council receive regular reports on the operational status of these help desks and cases of harassment as well as other human rights violations, and any incidents are advised and monitored.

## Human Rights Due Diligence

In accordance with the UN Guiding Principles on Business and Human Rights, the JFE Group conducts due diligence on human rights. The Group is a member of Global Compact Network Japan, where information is exchanged with other participating companies and groups in the furtherance of its own initiatives.

### Human rights due diligence process



### 1) Identify human rights risks

We identified human rights risks in the JFE Group's supply chain for each type of stakeholder, i.e., employees and suppliers (women, children, local residents, etc.), taking into consideration local character and human rights risks unique to the sector, after creating a long list of human rights risks while referring to international rules and guidelines.

### Identified 15 human rights issues to consider

1. Comply with standards and guidelines for respecting human rights in line with international norms	2. Non-complicity in human rights violations, compliance, social security, fair competition	3. Prohibition of discrimination under the law
4. Access to relief	5. Thorough management of suppliers	6. Harassment and coercion
7. Women's rights	8. Child labor	9. Forced labor
10. Occupational safety and health	11. Work hours	12. Proper work environment
13. Wages that afford adequate living standards	14. Freedom of association, right to group negotiation	15. Rights of indigenous tribes and local residents

### 2) Investigate current status

In the JFE Group Basic Policy on Human Rights and the basic procurement guidelines of each Group company, we disclose policies for dealing with human rights risks, such as child labor and forced labor. As access to relief, we have set up a whistleblowing system. We also stringently engage in compliance, including the prevention of corruption. We audit the human rights initiatives, systems,



and rules of other companies to confirm the current human rights risk management system is working as designed.

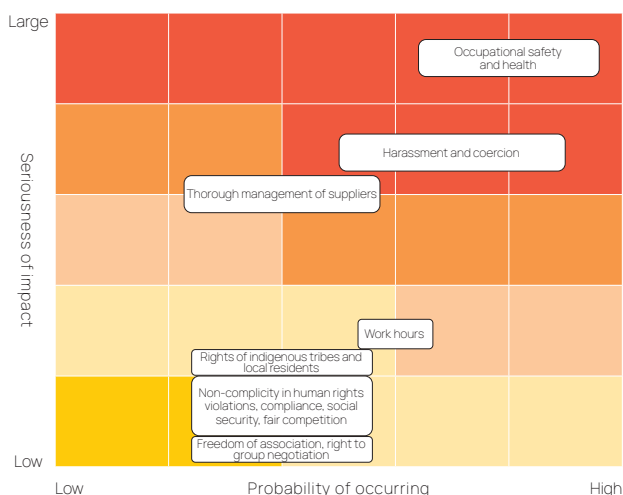
### 3) Assess risks and determine impact

Regarding identified human rights issues that should be addressed, the Company conducted a risk assessment that considers the seriousness of the impact and likelihood of the risk, and examined the state of initiatives to respect human rights through documented surveys and interviews, in order to gain a more accurate understanding of actual conditions. In the risk assessment process, we identified the negative impact that human rights risks could have on the JFE Group and our stakeholders.

#### Human rights risks identified as requiring a response due to high risk

- Occupational safety and health
- Harassment and coercion
- Thorough management of suppliers (create human rights risk management system for entire supply chain)

#### Map of serious human rights risks



### 4) Consider measures to mitigate identified human rights risks

We addressed the identified human rights risks, took corrective and preventative action, set up promotion structures, and implemented measures to mitigate risks. We have set KPIs for occupational health and safety and workplace harassment, and advanced efforts to eliminate injuries and harassment at work. We continue to implement and strengthen these activities. We are creating a management structure for human rights risks throughout the supply chain with the aim of building a sustainable and robust supply chain. We determine the priority of our investigations while considering the severity and potential emergence of human rights risks. We will also continue to survey our suppliers about human rights risks.

### 5) Information disclosure to stakeholders

We disclose the JFE Group Basic Policy on Human Rights and procurement guidelines of each operating company on our website. We will continue to appropriately disclose information to stakeholders concerning our initiatives for respecting human rights, including human rights due diligence, as well as progress on these initiatives.

## Initiatives in Fiscal 2023

### (1) Human rights due diligence at key Group companies

In fiscal 2023, we completed a survey of human rights risks at approximately 100 key domestic Group companies, which were selected based on the potential for a significant impact from human rights risks, such as on sales. Based on the results of these surveys, we have been working on measures aimed at mitigating and preventing human rights risks.

### (2) Establish human rights risk management system for suppliers

Using the CSR Procurement Self-Assessment Tool Set provided by Global Compact Network Japan, we conducted a survey on human rights risks at approximately 400 suppliers that ranked high on the priority scale for their business presence in high-risk countries. While some issues were identified, no major human rights risks were found.

## Future Initiatives

Going forward, we will continue to promote measures to correct and mitigate identified human rights risks while expanding efforts in human rights due diligence. To ensure steady progress in these initiatives, we will implement appropriate evaluations and improvements under the supervision of the JFE Group Sustainability Council and the Board of Directors, with the aim of enhancing effectiveness.

### (1) Expand human rights due diligence to Group companies

In fiscal 2024, we plan to conduct surveys of human rights risks at overseas Group companies, with those in high-risk countries given the highest priority. We will also continue to support the correction and improvement of human rights risks at key domestic Group companies that have already been surveyed, and will review methods for conducting periodic risk assessments and verifying the status of corrections.

### (2) Establish human rights risk management system for suppliers

In fiscal 2024, we will provide feedback on the results of the fiscal 2023 survey to our suppliers, and for those found to have human rights risks, we will provide support to rectify these shortcomings. Additionally, we will review the scope and prioritization of future surveys in preparation for expanding them.

JFE Group Basic Policy on Human Rights

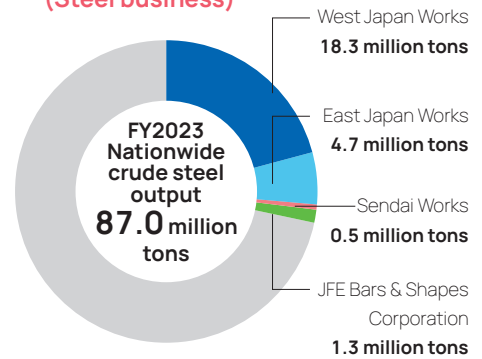
[https://www.jfe-holdings.co.jp/en/sustainability/social/human\\_rights/](https://www.jfe-holdings.co.jp/en/sustainability/social/human_rights/)

# Data

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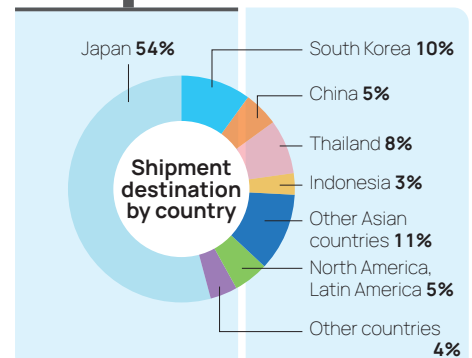
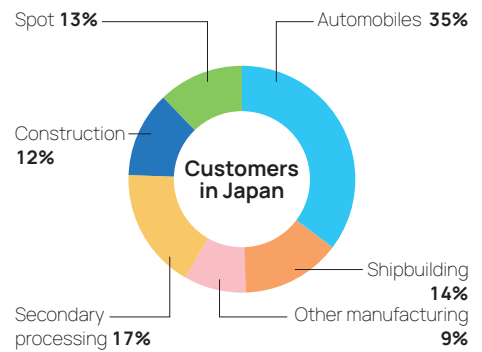
## Main Domestic Bases

### Domestic production volume (Steel business)



About **28%** of domestic crude steel output

### Shipment destination (Steel business)



## Main domestic bases



Blast furnace



Electric arc furnace

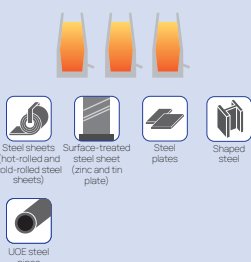
### JFE Steel

#### West Japan Works

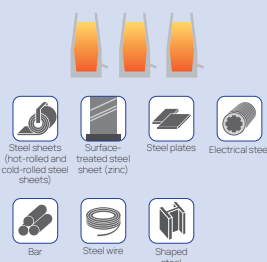
A

The West Japan Works is situated on roughly 25.1 million square meters of land as JFE Steel's core steelworks, one of the largest steelworks in the world. We aim for it to be the best steelworks in the world in terms of both quality and quantity, with advanced technological capabilities and highly efficient production.

#### Fukuyama district



#### Kurashiki district

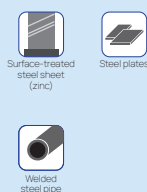


#### East Japan Works

B

The East Japan Works sits on approximately 15.98 million square meters of land located near the Tokyo metropolitan area. It consists of the Keihin district, where Japan's first private-sector steelworks was built, and the Chiba district, where Japan's first integrated steelworks was constructed after the end of World War II. The Nishinomiya plant produces stainless steel products with the Chiba district.

#### Keihin district



#### Chiba district



#### Nishinomiya Plant

C

#### Sendai Works

D

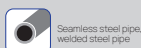
The Sendai Works specializes in bar and steel wire. With an integrated production system from steelmaking to rolling, the Sendai Works provides high-quality products thanks to thorough quality and process management.



#### Chita Works

E

The Chita Works is one of a few steelworks in the world that specializes in the production of steel pipes. It boasts the best product lineup in the world for a single steelworks, producing a wide variety and sizes of steel pipe products.



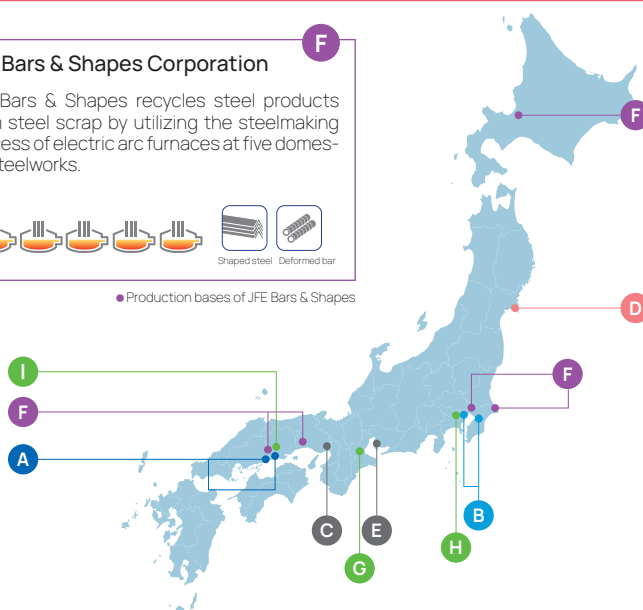
#### JFE Bars & Shapes Corporation

F

JFE Bars & Shapes recycles steel products from steel scrap by utilizing the steelmaking process of electric arc furnaces at five domestic steelworks.



● Production bases of JFE Bars & Shapes



### JFE Engineering

#### Tsu Works

G



#### Tsurumi Works

H



#### Kasaoka Monopile Factory

I



### Steel Research Laboratory

This laboratory conducts research in basic technology that supports all of our production bases, while also developing production processes and products.

#### Joint development facilities with customers

##### Chiba district

#### Customer Solutions Lab (CSL)

Early vendor involvement (EVI) base for customers in the automobile field

##### Keihin district

#### Steel Structural Materials Solutions Center (THINK SMART)

Joint research with customers, universities, and corporate research institutions in the structural steel field

##### Fukuyama district

#### Customer Center Fukuyama (CCF)

EVI base for customers in the automobile and steel materials fields

## Main Overseas Bases

[ 117 bases in 23 countries and regions ]

### Europe/Middle East

<Steel>

- AGPC (Manufacture and sale of large-diameter welded steel pipe; U.A.E.)

<Engineering>

- Standardkessel (All engineering of environmental and power generation plants; Germany)

<Shoji>

- JSS (Processing and sale of electrical steel; Serbia)

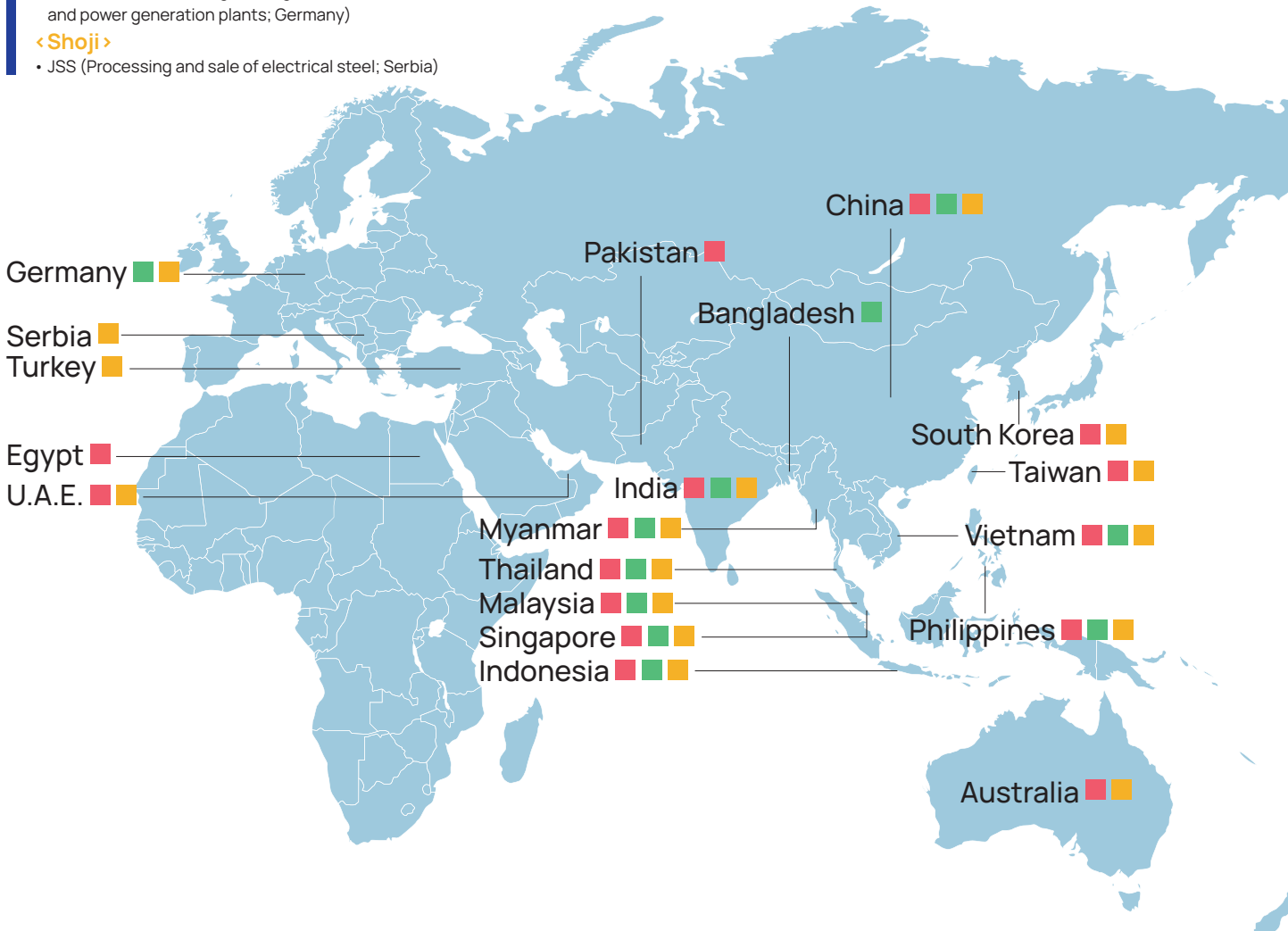
### China

<Steel>

- Fujian Sino-Japan Metal (Manufacture and sale of steel sheet (tin plate) for cans)
- BHNK (Processing and welding of tool joints for drill pipes, sale of drill pipe)
- GJSS (Manufacture and sale of steel sheet for automobiles)
- BJSS (Manufacture and sale of special steel bar)

<Shoji>

- KSG (Processing and sale of steel sheet for automobiles)
- KSZ (Processing and sale of electrical steel)



**Steel business**  
**41** bases in  
**18** countries and regions

**Engineering business**  
**17** bases in  
**12** countries

**Trading business**  
**59** bases in  
**20** countries and regions

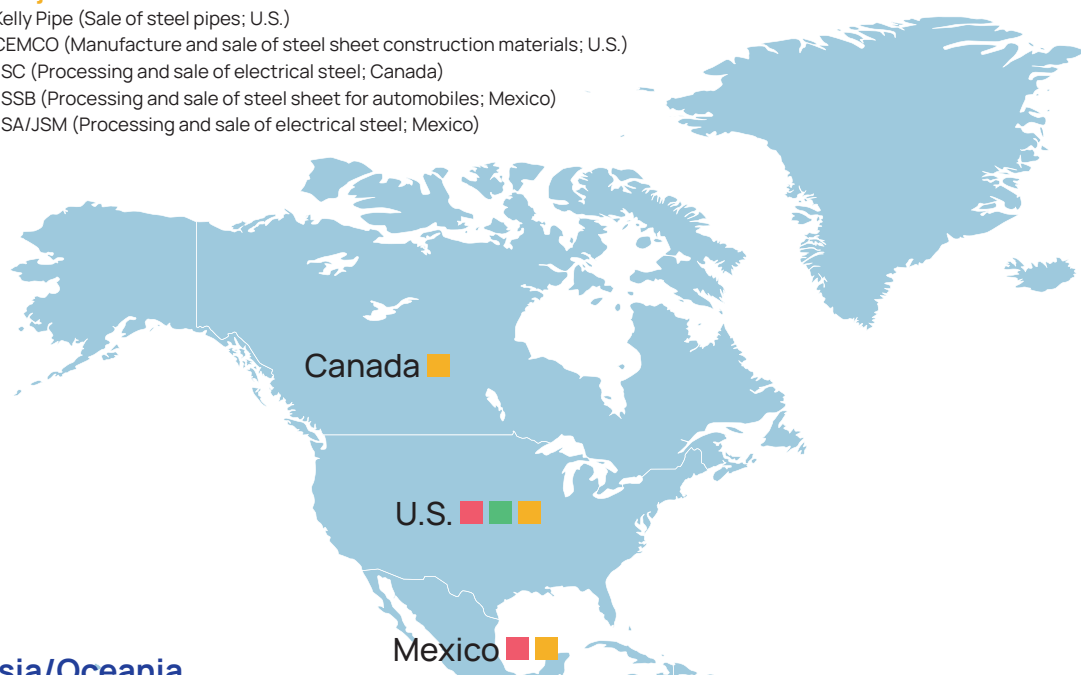
## North/Central/South America

### <Steel>

- CSI (Manufacture and sale of steel products; U.S.)
- NJSM (Manufacture and sale of steel sheet for automobiles; Mexico)
- NES (Manufacture and sale of ferrosilicon; Brazil)

### <Shoji>

- Kelly Pipe (Sale of steel pipes; U.S.)
- CEMCO (Manufacture and sale of steel sheet construction materials; U.S.)
- JSC (Processing and sale of electrical steel; Canada)
- JSSB (Processing and sale of steel sheet for automobiles; Mexico)
- JSA/JSM (Processing and sale of electrical steel; Mexico)



## Asia/Oceania

### <Steel>

- Dongkuk Steel (Manufacture and sale of shaped steel, rebar, thick steel plates, and cold-rolled products; South Korea)
- TCR (Manufacture and sale of cold-rolled steel sheet; Thailand)
- TCS (Manufacture and sale of electrogalvanized steel sheet; Thailand)
- JSST (Manufacture and sale of steel sheet for automobiles; Thailand)
- SSI (Manufacture and sale of hot-rolled steel sheet; Thailand)
- J-Spiral (Manufacture and sale of spiral steel pipe and processed construction materials; Vietnam)
- FHS (Overseas integrated steelworks; Vietnam)
- PSC (Manufacture and sale of sintered ore; Philippines)
- JSST (Manufacture and sale of steel sheet for automobiles; Indonesia)
- Perstima (Manufacture and sale of steel sheet for cans; Malaysia)
- JSW Steel (Overseas integrated steelworks; India)
- JFE-STAR (Investments in resource projects; Australia)

### <Engineering>

- JFETM (Planning, design, and project management; Philippines)
- JFEE India (Planning and design of environmental and power generation plants; India)

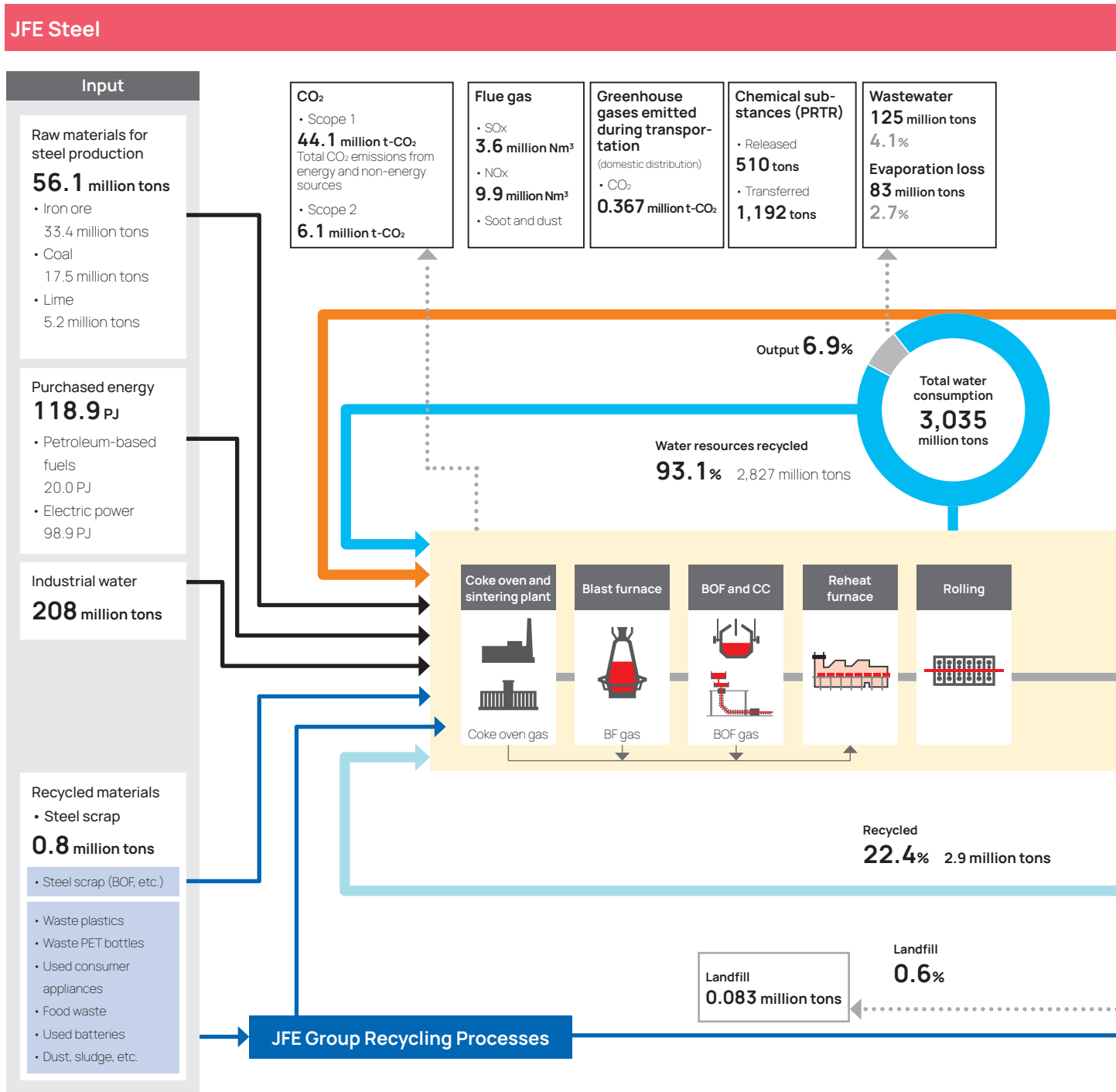
### <Shoji>

- JSSI (Processing and sale of electrical steel; Indonesia)
- JSSV (Processing and sale of electrical steel; Vietnam)
- CMT (Processing and sale of steel sheet for automobiles; Thailand)
- SASC (Processing and sale of steel sheet for automobiles; Thailand)
- JSI (Processing and sale of electrical steel; India)

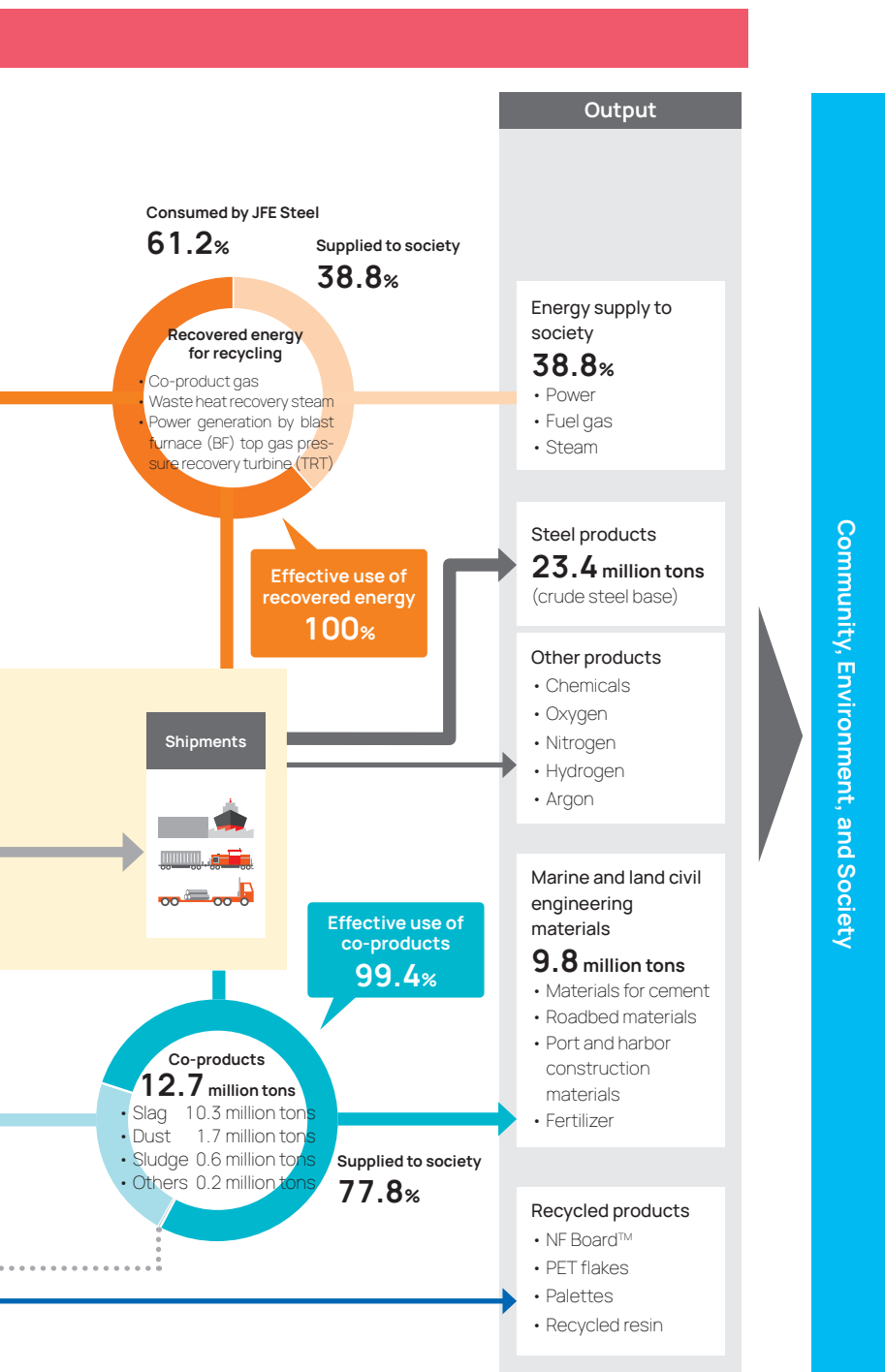
# Material Flow

JFE Steel works to reduce the environmental impact of its iron and steelmaking processes, including through the effective use of resources. The company recycles 93.1% of the water it uses for production and uses 99.4% of its co-products, such as iron-steel 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.

## FY2023 results



→ Supply (Solid line)  
 ...→ Emissions (Dotted line)



**JFE Engineering (Head Office and Works)**

Input	
Steel	24,000 tons
Energy	
• Electric power purchased	23.4 GWh
• Class A heavy oil	177 kl
• Kerosene	3.4 kl
• Light oil	280 kl
• Gasoline	14.9 kl
• City gas	354,000 Nm <sup>3</sup>
• LPG	69.2 tons
Water	72,900 tons

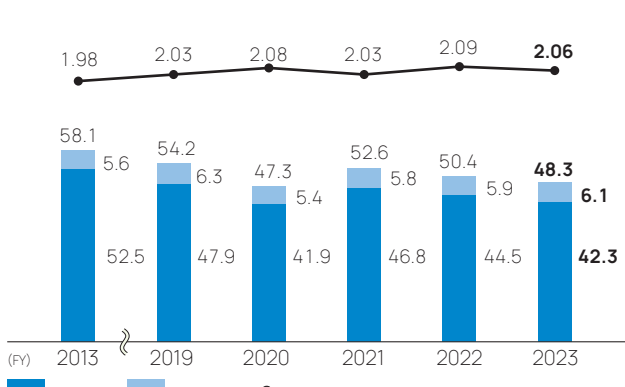
JFE Engineering	
• Tsurumi Engineering and Manufacturing Center	
• Tsu Works	

Output and Emissions	
Products	23,000 tons
CO <sub>2</sub>	5,300 t-CO <sub>2</sub>
• Scope 1	2,500 t-CO <sub>2</sub>
• Scope 2	2,800 t-CO <sub>2</sub>
Waste generated	925 tons
• Industrial wastes	706 tons
• General wastes	219 tons
Wastewater (ocean only)	122,000 tons
Others (PRTR)	83 tons

# Non-financial Highlights

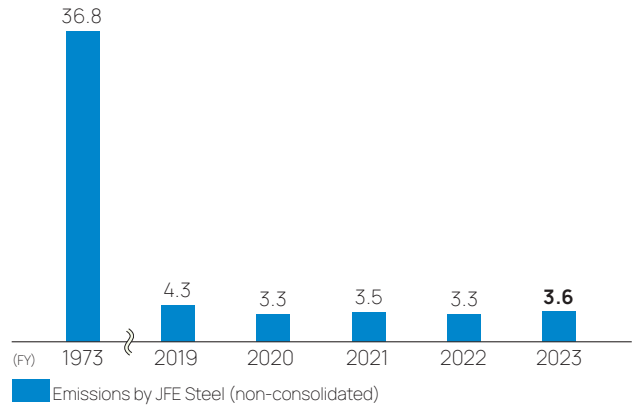
## Environmental Indicators

**CO<sub>2</sub> emissions from energy sources (million t-CO<sub>2</sub>) and CO<sub>2</sub> emission intensity (t-CO<sub>2</sub>/t-s) of JFE Steel**

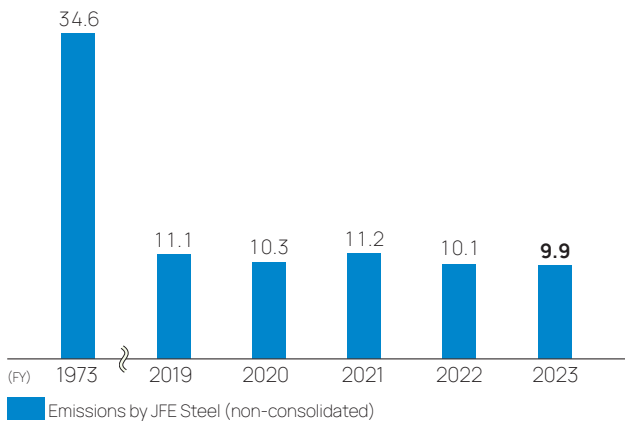


\*1 The CO<sub>2</sub> coefficient for electricity purchased in FY2021 is that of FY2020 on the Japan Iron and Steel Federation's Commitment to a Low Carbon Society.  
 \*2 Data of JFE Bars & Shapes Corporation Sendai Works is included in the figures FY2013.

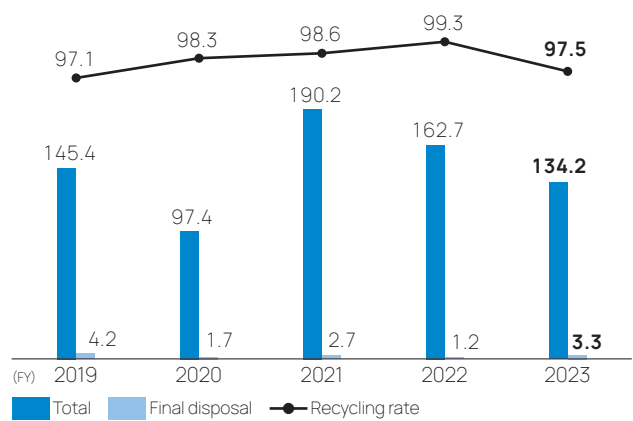
**SOx emissions by JFE Steel (million Nm<sup>3</sup>)**



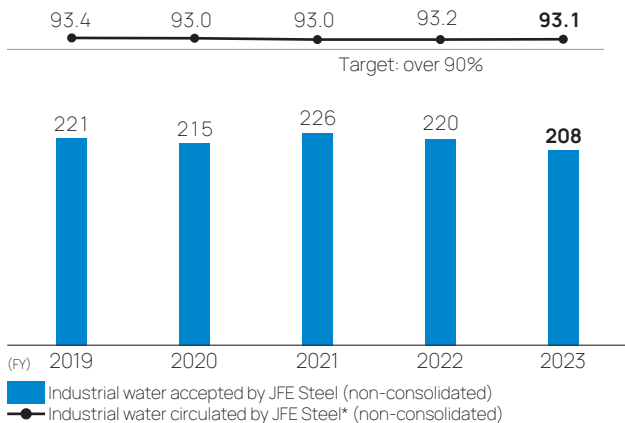
**NOx emissions by JFE Steel (million Nm<sup>3</sup>)**



**Waste generated at construction sites (thousand tons) and recycling rate (%) of JFE Engineering**

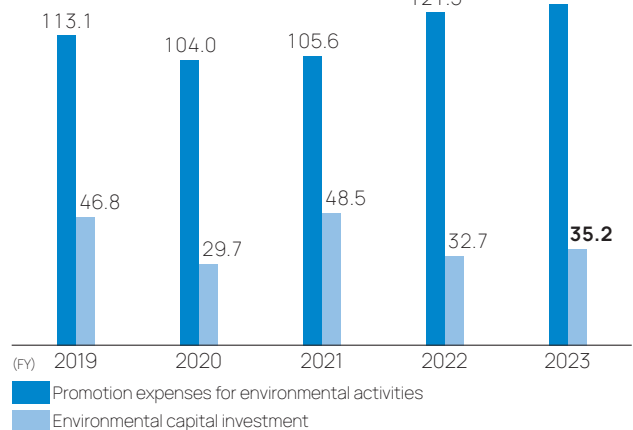


**Industrial water accepted (million tons) and circulated (%) by JFE Steel**



\* Industrial water circulated (%) = (Total amount - industrial water accepted) / total amount × 100

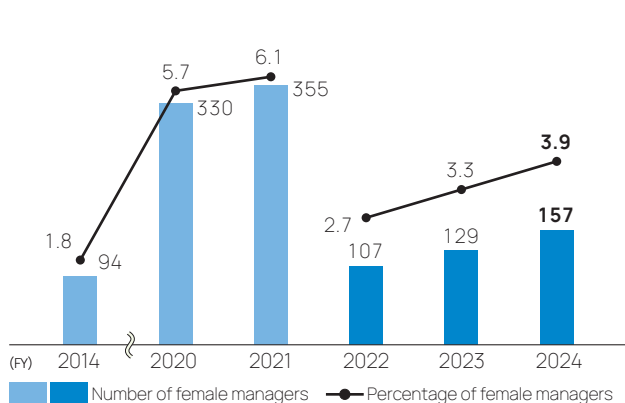
**Environmental capital investment (billion yen) and promotion expenses for environmental activities (billion yen) of JFE Steel**





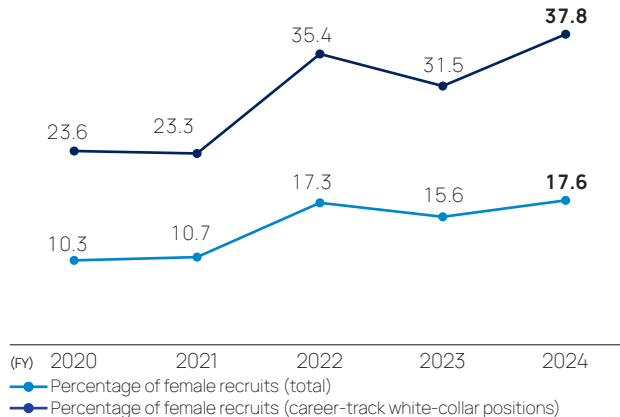
## Societal Indicators

**Number of female managers (persons) and percentage of female managers (%)**



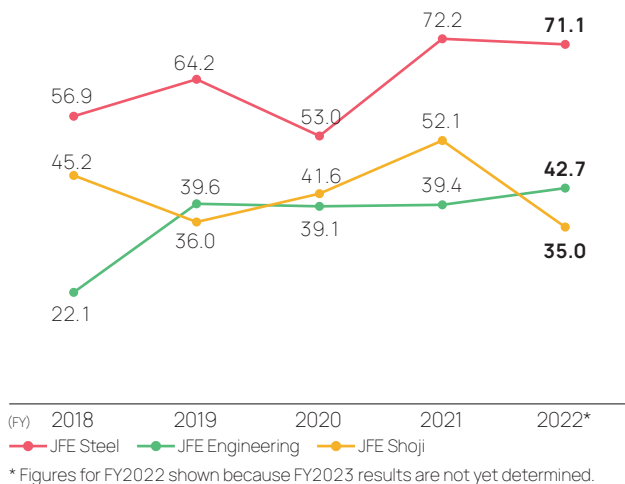
\* Former definition of KPI used for figures before FY2021 (team leader or higher). Number of women in management positions (section manager or higher) set as new KPI from FY2022.

**Percentage of female recruits (total) (%) and percentage of female recruits (career-track white-collar positions) (%)**



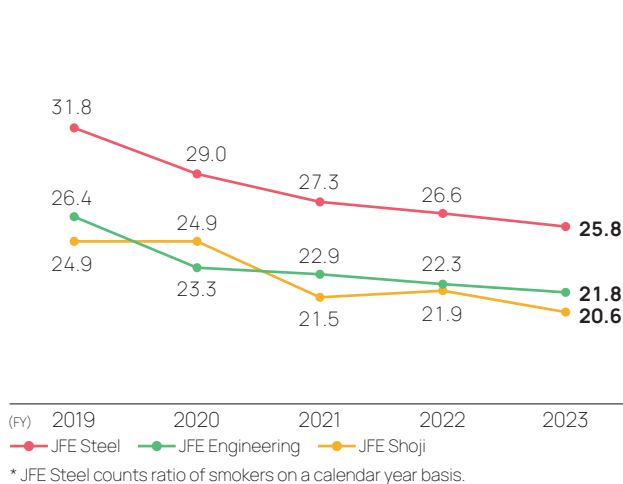
\* Scope of calculation: total of three operating companies

**Provision rates of health guidance (%)**



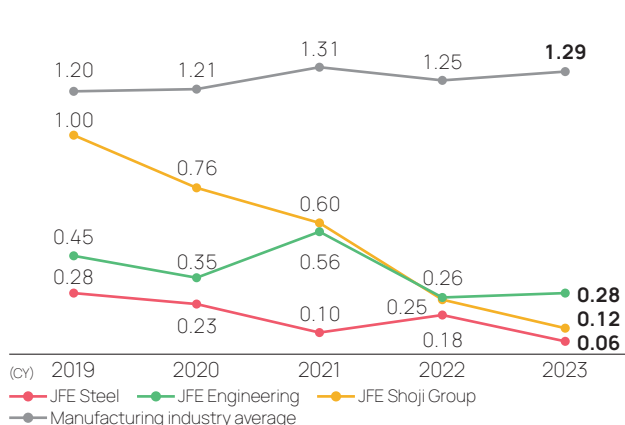
\* Figures for FY2022 shown because FY2023 results are not yet determined.

**Ratio of smokers (%)**



\* JFE Steel counts ratio of smokers on a calendar year basis.

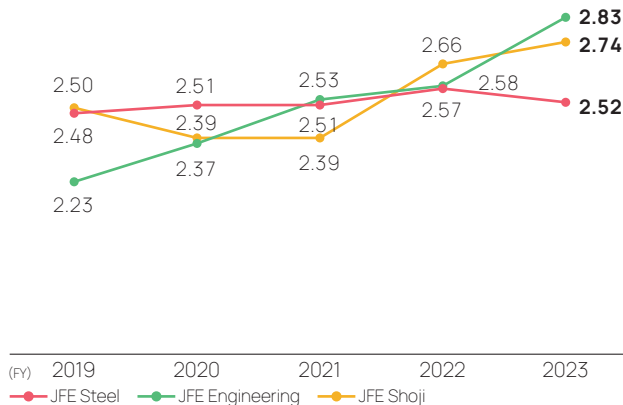
**Lost-work injuries**



\*1 JFE Steel and JFE Engineering: parent company, business associates, and contractors; JFE Shoji Group: domestic parent and group companies, business associates, and contractors

\*2 Lost-work injuries = Number of lost-time injuries / number of hours worked × 1,000,000

**Employment of people with disabilities (as of June 1 of each year) (%)**



## Data

# Financial Highlights

The JFE Group adopted International Financial Reporting Standards (IFRS) from FY2018, in place of the generally accepted accounting principles in Japan (JGAAP).

	JGAAP			
	FY2013	FY2014	FY2015	FY2016
<b>Operating results</b>				
Net sales (JGAAP) / Revenue (IFRS)	3,666	3,850	3,431	3,308
Ordinary income (JGAAP) / Business profit* <sup>1</sup> (IFRS)	173	231	64	84
Income before income taxes (JGAAP) / Profit before tax (IFRS)	160	226	74	105
EBITDA* <sup>2</sup> (JGAAP) / EBITDA* <sup>3</sup> (IFRS)	368	421	254	279
Profit attributable to owners of parent	102	139	33	67
Capital expenditures (construction basis)	175	225	212	234
Depreciation and amortization	181	176	177	182
Research and development expenses	31	32	35	35
<b>Financial position</b>				
Total assets	4,241	4,639	4,234	4,336
Property, plant and equipment	1,599	1,629	1,627	1,650
Shareholders' equity (JGAAP) / Equity attributable to owners of parent (IFRS)	1,702	1,938	1,804	1,865
Net assets (JGAAP) / Equity (IFRS)	1,745	1,990	1,857	1,921
Debt outstanding (JGAAP) / Interest-bearing debt outstanding (IFRS)	1,534	1,501	1,379	1,375
<b>Cash flows</b>				
Cash flows from operating activities	254	297	267	185
Cash flows from investing activities	(164)	(216)	(137)	(163)
Free cash flow* <sup>4</sup>	90	81	129	21
Cash flows from financing activities	(105)	(78)	(144)	(18)
<b>Per share data</b>				
Profit attributable to owners of parent (yen/share)	177	242	58	118
Net assets (JGAAP) / Equity attributable to owners of parent (IFRS) (yen/share)	2,951	3,362	3,128	3,236
Dividends (yen/share)	40	60	30	30
Payout ratio (%)	22.5	24.8	51.4	25.5
<b>Financial indicators</b>				
Debt/EBITDA ratio* <sup>5</sup> (JGAAP) / Debt/EBITDA ratio* <sup>6</sup> (IFRS) (times)	4.2	3.6	5.4	4.9
ROE* <sup>7</sup> (JGAAP) / ROE* <sup>8</sup> (IFRS) (%)	6.3	7.7	1.8	3.7
ROA* <sup>9</sup> (JGAAP) / ROA* <sup>10</sup> (IFRS) (%)	4.5	5.5	1.7	2.3
Equity ratio (%)	40.1	41.8	42.6	43.0
D/E ratio* <sup>11</sup> (JGAAP) / D/E ratio* <sup>12</sup> (IFRS) (%)	67.9	59.0	56.9	51.4
Year-end share price (yen/share)	1,943	2,654	1,516	1,909
<b>Segment information</b>				
Net sales (JGAAP) / Revenue (IFRS)				
Steel business	2,691	2,873	2,445	2,349
Engineering business	284	367	397	426
Trading business	1,781	1,934	1,756	1,671
Ordinary income (JGAAP) / Segment profit* <sup>13</sup> (IFRS)				
Steel business	126	188	27	40
Engineering business	18	18	20	26
Trading business	21	24	15	21
<b>Others</b>				
Crude steel production (JFE Steel on a non-consolidated basis) (million t)	28.7	28.4	27.4	28.1
Crude steel production (JFE Steel on a consolidated basis) (million t)	31.6	31.0	29.8	30.4
Shipment (JFE Steel on a non-consolidated basis) (million t)	25.5	26.1	25.4	25.7
Average selling price (JFE Steel on a non-consolidated basis) (thousand yen/t)	75.7	77.1	66.8	62.8
Export ratio on a value basis (JFE Steel on a non-consolidated basis) (%)	48.4	48.1	45.8	44.0
Employees (JFE Holdings on a consolidated basis) (persons)	57,210	58,856	59,460	60,439

\*1 Business profit: Profit before tax excluding finance income and one-time items of a materially significant value

\*2 EBITDA (JGAAP): Ordinary income + Interest expenses + Depreciation and amortization

\*3 EBITDA (IFRS): Business profit + Depreciation and amortization

\*4 Free cash flow: Cash flows from operating activities + Cash flows from investing activities

\*5 Debt/EBITDA ratio (JGAAP): Debt outstanding / EBITDA

\*6 Debt/EBITDA ratio (IFRS): Interest-bearing debt outstanding / EBITDA

\*7 ROE (JGAAP): Profit attributable to owners of parent / Shareholders' equity

\*8 ROE (IFRS): Profit attributable to owners of parent / Equity attributable to owners of parent

(billion yen)

		IFRS						
FY2017	FY2018	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	
3,678	3,961	3,873	3,729	3,227	4,365	5,268	<b>5,174</b>	
216	221	232	37	(12)	416	235	<b>298</b>	
213	209	209	(213)	(4)	388	210	<b>268</b>	
388	405	428	269	223	668	505	<b>572</b>	
144	164	163	(197)	(21)	288	162	<b>197</b>	
257	287	329	391	342	340	325	<b>346</b>	
159	172	196	231	236	252	269	<b>274</b>	
34	37	37	38	36	39	43	<b>43</b>	
4,440	4,648	4,709	4,646	4,654	5,287	5,524	<b>5,754</b>	
1,702	1,782	1,835	1,717	1,772	1,850	1,891	<b>1,948</b>	
1,949	2,012	1,926	1,627	1,679	1,988	2,120	<b>2,464</b>	
2,009	2,079	1,991	1,706	1,760	2,070	2,193	<b>2,538</b>	
1,330	1,449	1,523	1,814	1,806	1,849	1,862	<b>1,830</b>	
298	235	268	261	247	298	395	<b>478</b>	
(194)	(284)	(313)	(358)	(164)	(288)	(274)	<b>(325)</b>	
103	(48)	(45)	(97)	83	10	121	<b>153</b>	
(90)	56	51	103	(30)	(57)	(110)	<b>(45)</b>	
251	285	284	(343)	(38)	500	281	<b>323</b>	
3,382	3,495	3,345	2,826	2,916	3,453	3,650	<b>3,875</b>	
80	95	95	20	10	140	80	<b>100</b>	
31.9	33.3	33.5	—	—	28.0	28.5	<b>30.9</b>	
3.4	3.6	3.6	6.7	8.1	2.8	3.7	<b>3.2</b>	
7.6	8.3	8.6	(11.1)	(1.3)	15.7	7.9	<b>8.6</b>	
5.2	5.1	5.0	0.8	(0.3)	8.4	4.4	<b>5.3</b>	
43.9	43.3	40.9	35.0	36.1	37.6	38.4	<b>42.8</b>	
58.1	62.0	68.2	96.4	93.2	80.8	67.8	<b>58.0</b>	
2,144	1,879	1,879	703	1,363	1,723	1,679	<b>2,540</b>	
2,715	2,808	2,830	2,681	2,255	3,173	3,881	<b>3,716</b>	
391	485	485	512	485	508	512	<b>539</b>	
1,907	2,060	1,125	1,084	932	1,231	1,514	<b>1,476</b>	
198	164	161	(8)	(65)	323	146	<b>202</b>	
19	20	20	23	24	26	13	<b>24</b>	
33	35	35	27	20	55	65	<b>48</b>	
28.5	26.3	26.3	26.7	22.8	25.9	24.1	<b>23.5</b>	
30.1	27.9	27.9	28.1	24.0	27.3	25.5	<b>24.8</b>	
25.3	23.8	23.8	23.5	20.5	22.4	21.7	<b>20.8</b>	
75.3	81.5	81.5	78.8	74.8	103.7	130.8	<b>131.5</b>	
44.4	41.7	41.7	41.5	42.3	45.5	44.5	<b>42.9</b>	
61,234	62,076	62,083	64,009	64,371	64,296	64,241	<b>62,218</b>	

\* 9 ROA (JGAAP): (Ordinary income + Interest expenses) / Total assets (average)

\*10 ROA (IFRS): Business profit / Total assets

\*11 D/E ratio (JGAAP): Debt outstanding / Shareholders' equity

For debt having a capital component, a portion of its issue price is deemed to be capital, as assessed by rating agencies.

\*12 D/E ratio (IFRS): Interest-bearing debt outstanding / Equity attributable to owners of parent

For debt having a capital component, a portion of its issue price is deemed to be capital, as assessed by rating agencies.

\*13 Segment profit: Profit including finance income in business profit

# Financial Performance

## Consolidated Statement of Financial Position

(million yen)

	As of March 31, 2023	As of March 31, 2024
<b>Assets</b>		
<b>Current assets</b>		
Cash and cash equivalents	119,391	243,079
Trade and other receivables	776,115	762,428
Contract assets	116,293	134,569
Inventories	1,367,230	1,348,378
Income taxes receivable	22,957	5,792
Other financial assets	18,937	18,778
Other current assets	96,759	113,992
Subtotal	2,517,685	2,627,020
Assets held for sale	40,929	—
Total current assets	2,558,615	2,627,020
<b>Non-current assets</b>		
Property, plant and equipment	1,891,053	1,948,217
Goodwill	14,911	15,446
Intangible assets	126,855	140,591
Right-of-use asset	98,611	98,758
Investment property	53,559	52,849
Investments accounted for using equity method	465,482	561,477
Retirement benefit asset	23,521	29,495
Deferred tax assets	74,728	56,249
Other financial assets	200,599	207,448
Other non-current assets	16,100	17,410
Total non-current assets	2,965,425	3,127,944
Total assets	5,524,040	5,754,964
<b>Liabilities and equity</b>		
<b>Liabilities</b>		
<b>Current liabilities</b>		
Trade and other payables	703,212	667,072
Bonds payable, borrowings, and lease liabilities	397,026	426,428
Contract liabilities	48,543	50,186
Income taxes payable, etc.	32,320	32,698
Provisions	10,781	12,191
Other financial liabilities	181,046	149,300
Other current liabilities	265,268	282,317
Subtotal	1,638,200	1,620,195
Liabilities directly associated with assets held for sale	23,598	—
Total current liabilities	1,661,798	1,620,195
<b>Non-current liabilities</b>		
Bonds payable, borrowings, and lease liabilities	1,465,939	1,403,849
Retirement benefit liability	120,663	105,706
Provisions	19,128	17,592
Deferred tax liabilities	5,480	6,050
Other financial liabilities	41,325	53,467
Other non-current liabilities	16,308	9,581
Total non-current liabilities	1,668,846	1,596,247
Total liabilities	3,330,644	3,216,443
<b>Equity</b>		
Share capital	147,143	171,310
Capital surplus	640,536	587,266
Retained earnings	1,397,735	1,570,027
Treasury shares	(156,408)	(14,938)
Other components of equity	91,315	150,461
Equity attributable to owners of parent	2,120,322	2,464,128
Non-controlling interests	73,073	74,392
Total equity	2,193,395	2,538,521
Total liabilities and equity	5,524,040	5,754,964

## Consolidated Statement of Profit or Loss

(million yen)

	Fiscal year ended March 31, 2023	Fiscal year ended March 31, 2024
Revenue	5,268,794	5,174,632
Cost of sales	(4,659,371)	(4,518,447)
Gross profit	609,423	656,185
Selling, general and administrative expense	(392,446)	(408,682)
Share of profit of investments accounted for using equity method	23,002	56,160
Other income	38,060	47,482
Other expenses	(42,198)	(52,921)
Business profit	235,841	298,224
Gain on sales of land	4,105	—
Impairment losses	(3,542)	(11,220)
Loss on liquidation of subsidiaries and associates	(6,739)	—
Restructuring expenses	(4,578)	—
Operating profit	225,086	287,003
Finance income	3,677	5,048
Finance costs	(18,481)	(23,665)
Profit before tax	210,282	268,386
Income tax expense	(43,530)	(67,414)
Net profit	166,752	200,971
Profit attributable to:		
Owners of parent	162,621	197,421
Non-controlling interests	4,130	3,550
Net profit	166,752	200,971
Earnings per share		
Basic earnings per share (yen)	280.68	323.33
Diluted earnings per share (yen)	280.52	315.09

## Consolidated Statement of Comprehensive Income

(million yen)

	Fiscal year ended March 31, 2023	Fiscal year ended March 31, 2024
Net profit	166,752	200,971
Other comprehensive income		
Items that will not be reclassified to profit or loss		
Remeasurements of defined benefit plans	8,144	18,000
Net change in fair value of equity instruments designated as measured at fair value through other comprehensive income	(8,651)	11,698
Share of other comprehensive income of investments accounted for using equity method	2,891	653
Total of items that will not be reclassified to profit or loss	2,384	30,351
Items that may be reclassified to profit or loss		
Exchange differences on translation of foreign operations	18,239	22,569
Effective portion of cash flow hedges	1,823	5,035
Share of other comprehensive income of investments accounted for using equity method	14,614	29,635
Total of items that may be reclassified to profit or loss	34,677	57,240
Total other comprehensive income	37,061	87,592
Comprehensive income	203,814	288,563
Comprehensive income attributable to:		
Owners of parent	198,999	284,357
Non-controlling interests	4,815	4,206
Comprehensive income	203,814	288,563

## Data

### Financial Performance

## Consolidated Statement of Changes in Equity

Fiscal year ended March 31, 2023

(million yen)

	Equity attributable to owners of parent											
	Equity attributable to owners of parent				Other components of equity				Total	Total	Non-controlling interests	Total equity
	Share capital	Capital surplus	Retained earnings	Treasury shares	Re-measurements of defined benefit plans	Net change in fair value of equity instruments designated as measured at fair value through other comprehensive income	Exchange differences on translation of foreign operations	Effective portion of cash flow hedges				
Balance as of April 1, 2022	147,143	652,233	1,294,875	(180,580)	—	55,560	16,086	2,949	74,596	1,988,268	82,470	2,070,739
Net profit	—	—	162,621	—	—	—	—	—	—	162,621	4,130	166,752
Other comprehensive income	—	—	—	—	9,023	(6,700)	31,854	2,200	36,377	36,377	684	37,061
Comprehensive income	—	—	162,621	—	9,023	(6,700)	31,854	2,200	36,377	198,999	4,815	203,814
Purchase of treasury shares	—	—	—	(60)	—	—	—	—	—	(60)	—	(60)
Disposal of treasury shares	—	(2,000)	—	24,204	—	—	—	—	—	22,204	—	22,204
Dividends	—	—	(75,198)	—	—	—	—	—	—	(75,198)	(1,815)	(77,014)
Share-based payment transactions	—	131	—	27	—	—	—	—	—	158	—	158
Changes in scope of consolidation	—	—	—	—	—	—	—	—	—	—	(127)	(127)
Changes in ownership interest in subsidiaries	—	(9,827)	—	—	—	—	—	—	—	(9,827)	(12,382)	(22,210)
Transfer from other components of equity to retained earnings	—	—	15,437	—	(9,023)	(6,413)	—	—	(15,437)	—	—	—
Transfer to non-financial assets	—	—	—	—	—	—	—	(4,221)	(4,221)	(4,221)	—	(4,221)
Other	—	—	—	—	—	—	—	—	—	—	112	112
Total transactions with owners	—	(11,696)	(59,761)	24,172	(9,023)	(6,413)	—	(4,221)	(19,658)	(66,944)	(14,213)	(81,157)
Balance as of March 31, 2023	147,143	640,536	1,397,735	(156,408)	—	42,446	47,941	928	91,315	2,120,322	73,073	2,193,395

Fiscal year ended March 31, 2024

(million yen)

	Equity attributable to owners of parent												
	Equity attributable to owners of parent				Other components of equity				Total	Total	Non-controlling interests	Total equity	
	Share capital	Capital surplus	Retained earnings	Treasury shares	Share acquisition rights	Re-measurements of defined benefit plans	Net change in fair value of equity instruments designated as measured at fair value through other comprehensive income	Exchange differences on translation of foreign operations					Effective portion of cash flow hedges
Balance as of April 1, 2023	147,143	640,536	1,397,735	(156,408)	—	—	42,446	47,941	928	91,315	2,120,322	73,073	2,193,395
Net profit	—	—	197,421	—	—	—	—	—	—	197,421	3,550	200,971	
Other comprehensive income	—	—	—	—	—	18,281	11,862	48,094	8,697	86,935	656	87,592	
Comprehensive income	—	—	197,421	—	—	18,281	11,862	48,094	8,697	86,935	4,206	288,563	
Issuance of new shares	24,167	24,167	—	—	—	—	—	—	—	48,335	—	48,335	
Share issuance cost	—	(453)	—	—	—	—	—	—	—	(453)	—	(453)	
Purchase of treasury shares	—	—	—	(76)	—	—	—	—	—	(76)	—	(76)	
Disposal of treasury shares	—	(75,184)	—	141,432	—	—	—	—	—	66,248	—	66,248	
Dividends	—	—	(49,275)	—	—	—	—	—	—	(49,275)	(1,698)	(50,973)	
Share-based payment transactions	—	47	—	114	—	—	—	—	—	162	—	162	
Issuance of convertible bonds	—	—	—	—	3,081	—	—	—	—	3,081	—	3,081	
Changes in scope of consolidation	—	(1)	—	—	—	—	—	—	—	(1)	(484)	(485)	
Changes in ownership interest in subsidiaries	—	(1,846)	—	—	—	—	—	—	—	(1,846)	(801)	(2,648)	
Transfer from other components of equity to retained earnings	—	—	24,146	—	—	(18,281)	(5,864)	—	—	(24,146)	—	—	
Transfer to non-financial assets	—	—	—	—	—	—	—	—	(6,725)	(6,725)	—	(6,725)	
Other	—	—	—	—	—	—	—	—	—	—	97	97	
Total transactions with owners	24,167	(53,269)	(25,129)	141,470	3,081	(18,281)	(5,864)	—	(6,725)	(27,790)	(2,887)	56,561	
Balance as of March 31, 2024	171,310	587,266	1,570,027	(14,938)	3,081	—	48,444	96,035	2,900	150,461	2,464,128	74,392	2,538,521

## Consolidated Statement of Cash Flow

(million yen)

	Fiscal year ended March 31, 2023	Fiscal year ended March 31, 2024
Cash flows from operating activities		
Profit before tax	210,282	268,386
Depreciation and amortization	269,600	274,101
Changes in allowance	(5,172)	(559)
Interest and dividend income	(9,315)	(10,513)
Interest expenses	16,760	21,353
Share of loss (profit) of investments accounted for using equity method	(23,002)	(56,160)
Changes in trade and other receivables	19,336	31,139
Changes in inventories	(124,579)	34,780
Changes in trade and other payables	6,995	(43,563)
Other	117,396	(2,209)
Subtotal	478,301	516,754
Interest and dividends received	37,250	24,699
Interest paid	(15,155)	(20,507)
Income taxes paid	(104,599)	(41,979)
Net cash provided by (used in) operating activities	395,797	478,967
Cash flows from investing activities		
Purchase of property, plant and equipment, intangible assets, and investment property	(289,197)	(329,830)
Proceeds from sale of property, plant and equipment, intangible assets, and investment property	17,673	10,329
Purchase of investments	(9,072)	(16,183)
Proceeds from sale of investments	20,939	14,281
Other	(14,651)	(3,855)
Net cash provided by (used in) investing activities	(274,308)	(325,259)
Cash flows from financing activities		
Changes in short-term borrowings	(4,576)	(13,970)
Changes in commercial papers	19,999	(19,999)
Proceeds from long-term borrowings	305,876	60,347
Repayments of long-term borrowings	(330,944)	(130,654)
Proceeds from issuance of bonds	30,000	90,000
Payments for redemption of bonds	(20,000)	(40,000)
Proceeds from issuance of shares	—	52,072
Payments for purchase of treasury shares	(60)	(76)
Proceeds from disposal of treasury shares	884	62,499
Dividends paid to owners of parent	(75,198)	(49,275)
Other	(36,155)	(56,429)
Net cash provided by (used in) financing activities	(110,175)	(45,487)
Effect of exchange rate change on cash and cash equivalents	7,839	13,931
Changes in cash and cash equivalents	19,153	122,151
Changes in cash and cash equivalents resulting from transfer to assets held for sale	(1,536)	1,536
Cash and cash equivalents at beginning of period	101,773	119,391
Cash and cash equivalents at end of period	119,391	243,079

## Operating and Main Group Companies (As of April 1, 2024)

Notes: 1. Net sales / Revenue: Results for FY2023

2. Number of employees: As of March 31, 2024 (Consolidated)

\* Equity method affiliates

### Steel Business | JFE Steel

**Head office** Chiyoda-ku, Tokyo **Revenue** ¥3,716.0 billion **Number of employees** 43,081

#### Domestic group companies

■ JFE Mineral Company, Ltd. ■ Chiba Riverment and Cement Corporation ■ Mizushima Riverment Corporation ■ JFE Precisions Co., Ltd.  
 ■ JFE Plastic Resource Corporation ■ JFE Bars & Shapes Corporation ■ JFE Metal Products & Engineering, Inc. ■ JFE Galvanizing & Coating Co., Ltd.  
 ■ JFE Welded Pipe Manufacturing Co., Ltd. ■ JFE Container Co., Ltd. ■ JFE Steel Pipe Co., Ltd. ■ Galvatex Corporation ■ JFE Tubic Corporation  
 ■ JFE Techno-Wire Corporation ■ JFE Kozai Corporation ■ Daiwa Kohtai Co., Ltd. ■ GECOSS Corporation ■ JFE Plant Engineering Co., Ltd.  
 ■ JFE Advantech Co., Ltd. ■ JFE Civil Engineering & Construction Corporation ■ JFE Sekkei Ltd. ■ JFE Logistics Corporation  
 ■ JFE West Technology Corporation ■ JFE Wing Corporation ■ JFE Techno-Research Corporation ■ JFE Systems, Inc. ■ JFE Chemical Corporation  
 ■ JFE Life Corporation ■ JFE East Japan GS Co., Ltd. ■ JFE West Japan GS Co., Ltd. ■ JFE Apple East Corporation ■ JFE Apple West Corporation  
 ■ Shinagawa Refractories Co., Ltd.\* ■ Nippon Chuzo K.K.\* ■ Nippon Chutetsukan K.K.\* ■ EXA Corporation\* ■ Setouchi Joint Thermal Power Co., Ltd.\*  
 ■ K.K. JFE SANSO CENTER\* ■ Mizushima Eco-Works Co., Ltd.\*

### Engineering Business | JFE Engineering

**Head office** Chiyoda-ku, Tokyo **Yokohama head office** Yokohama, Kanagawa Prefecture **Revenue** ¥539.9 billion

**Number of employees** 10,466

#### Domestic group companies

■ Asukasoken Co., Ltd. ■ Urban Energy Corporation ■ AnyTech Inc. ■ Omuta Recycle Power Co., Ltd. ■ Kitanihon Industrial Co. Ltd.  
 ■ J&T Recycling Corporation ■ JFE Environmental Service Corporation ■ JFE Environment Technology Co., Ltd. ■ JFE Career Navi Corporation  
 ■ JFE Technos Co., Ltd. ■ JFE Pipeline Engineering Corporation ■ JFE Business Support Yokohama Corporation ■ JFE Project One Co., Ltd.  
 ■ J Farm Tomakomai Corporation ■ Japan Tunnel Systems Corporation\* ■ JP Steel Plantech Co.\* ■ Tsukishima JFE Aqua Solution Co., Ltd.\*  
 ■ Tohoku Dock Tekko K.K. ■ Fuji Kako Co., Ltd. ■ Mie Data Craft Co., Ltd. ■ Myoko Green Energy Co., Ltd.

### Trading Business | JFE Shoji

**Head office** Chiyoda-ku, Tokyo **Revenue** ¥1,476.4 billion **Number of employees** 8,618

#### Domestic group companies

■ JFE Shoji Steel Construction Materials Corporation ■ JFE Shoji Pipe & Fitting Corporation ■ JFE Shoji Electrical Steel Co., Ltd.  
 ■ Kawasho Foods Corporation ■ JFE Shoji Electronics Corporation ■ JFE Shoji Coil Center Corporation ■ Niigata Steel Corporation  
 ■ Nagano Can Corporation ■ Toyo Kinzoku Corporation ■ JFE Shoji Terre One Corporation ■ Tochigi Shearing Corporation ■ Hokuriku Steel Co., Ltd.  
 ■ K&I Tubular Corporation ■ Taisei Kogyo Corporation ■ Kadota Kozai Corporation ■ JFE Shoji Zosen Kako Corporation  
 ■ JFE Shoji Kohnan Steel Center Co., Ltd. ■ Naigai Steel Corporation ■ JFE Shoji Tinplate Center Corporation ■ Mizushima Steel Corporation  
 ■ Mizushima Metal Products Corporation ■ Nihon Jiseizai Kogyo Co., Ltd. ■ Kyushu-Tech Corporation ■ JFE Shoji Matech Inc.  
 ■ JFE Shoji Machinery & Materials Corporation ■ JFE Shoji Business Support, Inc. ■ JFE Shoji Service Corporation ■ Kadowaki Steel Material's Corporation  
 ■ Tohsen Corporation ■ Shin Nihon Kogyo Corporation ■ Yashimanada Corporation ■ Mitsuwa Tekken Corporation ■ JFE Shoji Jutaku Shizai Corporation  
 ■ Rollmat Japan Co., Ltd. ■ J Tekken Construction Produce Co., Ltd. ■ Aichi Kanzai Kogyo Corporation ■ Hoshi Kinzoku Corporation ■ Hokuriku Kogyo Corporation  
 ■ Kohnan Blanking Service Corporation ■ JFE Shoji Cormec Co., Ltd. ■ Hanwa Kozai Co., Ltd.\* ■ Kita-Kanto Steel Corporation\* ■ Ohmi Sangyo Co., Ltd.\*

### Shipbuilding Business | Japan Marine United

**Head office** Yokohama, Kanagawa Prefecture **Net sales** ¥286.4 billion **Number of employees** 4,892

#### Domestic group companies

■ JMU AMTEC Co., Ltd. ■ IMC Co., Ltd. ■ JMU Defense Systems Co., Ltd.

### Employee Data (Non-consolidated: Actual figures for FY2023)

#### JFE Steel

Number of employees (April 1, 2024)	14,599 (Male 13,351, Female 1,248)
Number of managers	1,659 (Male 1,625, Female 34)
Ratio of female managers	2.0%
Number of recruits	455 (Male 392, Female 63) (New graduates 328, Mid-career 127)
Average years employed	17.1 (Male 16.8, Female 20.3)
Turnover rate	2.6%
Number of annual leave days taken (average)	18.4 days/year
Overtime working hours (average)	24.9 hours/month
Number of employees working shorter hours for childcare (total number of persons)	82
Number of dispatched employees	146

#### JFE Engineering

Number of employees (April 1, 2024)	3,646 (Male 3,094, Female 552)
Number of managers	1,685 (Male 1,627, Female 58)
Ratio of female managers	3.4%
Number of recruits	162 (Male 131, Female 31) (New graduates 91, Mid-career 71)
Average years employed	15.8 (Male 15.8, Female 15.4)
Turnover rate	3.0%
Number of annual leave days taken (average)	19.4 days/year
Overtime working hours (average)	26.0 hours/month
Number of employees working shorter hours for childcare (total number of persons)	70
Number of dispatched employees	670



### Overseas group companies

■ Nova Era Silicon S.A. ■ Thai Coated Steel Sheet Co., Ltd. ■ JFE Steel Galvanizing (Thailand) Ltd. ■ Philippine Sinter Corporation  
 ■ PT. JFE Steel Galvanizing Indonesia ■ JFE Steel Australia Resources Pty. Ltd. ■ NUCOR-JFE STEEL MEXICO, S. de R.L. de C.V.\*  
 ■ California Steel Industries, Inc.\* ■ Fujian Sino-Japan Metal Co., Ltd.\* ■ Bohai NKK Drill Pipe Co., Ltd.\* ■ Guangzhou JFE Steel Sheet Co., Ltd.\*  
 ■ Inner Mongolia Erdos EJM Manganese Alloys Co., Ltd.\* ■ Jiaxing JFE Precision Steel Pipe Co., Ltd. ■ Shanghai Baowu JFE Clean Iron Powder Co., Ltd.\*  
 ■ BaoWu JFE Special Steel Co., Ltd.\* ■ JSW Steel Ltd.\* ■ Thai Cold Rolled Steel Sheet Public Co., Ltd.\* ■ PT. Sermani Steel\*  
 ■ Perusahaan Sadur Timah Malaysia (Perstima) Bhd.\* ■ JFE Steel Tubular Technical Center Pte. Ltd.\* ■ J-Spiral Steel Pipe Co., Ltd.\*  
 ■ AGRIMECO & JFE STEEL PRODUCTS CO., LTD.\* ■ AL GHARBIA PIPE COMPANY LLC\* ■ JFE MERANTI MYANMAR HOLDING PTE. LTD.  
 ■ JFE Connections America, Inc. ■ GECOSS VIETNAM COMPANY LIMITED

### Overseas group companies

■ JFE Techno Manila, Inc. ■ JFE Engineering (M) Sdn. Bhd. ■ PT. JFE Engineering Indonesia ■ JFE Engineering India Private Limited  
 ■ Mitr Project Services Co., Ltd. ■ Standardkessel Baumgarte Holding GmbH ■ J&M Steel Solutions Company Limited

### Overseas group companies

■ Guangzhou JFE Shoji Steel Products Co., Ltd. ■ Dongguan JFE Shoji Steel Products Co., Ltd. ■ Zhejiang JFE Shoji Steel Products Co., Ltd.  
 ■ Jiangsu JFE Shoji Steel Products Co., Ltd. ■ JFE Shoji Steel Philippines, Inc. ■ Central Metals (Thailand) Ltd. ■ Steel Alliance Service Center Co., Ltd.  
 ■ New Bangpoo Manufacturing Co., Ltd. ■ JFE Shoji Steel Vietnam Co., Ltd. ■ JFE Shoji Steel Hai Phong Co., Ltd.  
 ■ JFE Shoji Steel Malaysia Sdn. Bhd. ■ PT. JFE Shoji Steel Indonesia ■ JFE Shoji Steel India Private Limited ■ VEST LLC  
 ■ JFE Shoji Steel America, Inc. ■ JFE Shoji Steel de Mexico, S.A. de C.V. ■ Kelly Pipe Co., LLC ■ CEMCO, LLC ■ JFE Shoji Serbia d.o.o. Beograd  
 ■ JFE Shoji Steel Service Center Bajio, S.A.P.I. de C.V. ■ JFE Shoji Power Canada Inc. ■ Marushin Canneries (Malaysia) Sdn. Bhd.  
 ■ JY Steel Processing Co., Ltd. ■ KAWARIN ENTERPRISE PTE. LTD.\* ■ r. bourgeois JFE Shoji Magnetic Lamination, Inc.\*

## JFE Shoji

Number of employees (April 1, 2024)	1,051 (Male 618, Female 433)
Number of managers	617 (Male 555, Female 62)
Ratio of female managers	10.0%
Number of recruits	66 (Male 40, Female 26) (New graduates 43, Mid-career 23)
Average years employed	12.9 (Male 12.8, Female 12.9)
Turnover rate	2.8%
Number of annual leave days taken (average)	16.1 days/year
Overtime working hours (average)	30.2 hours/month
Number of employees working shorter hours for childcare (total number of persons)	67
Number of dispatched employees	27

## Company Profile / Share Information

### Company Profile (As of March 31, 2024)

Head Office: 2-2-3 Uchisaiwaicho, Chiyoda-ku, Tokyo 100-0011, Japan

TEL: +81-3-3597-4321

Established: September 27, 2002

Capital: ¥171.3 billion

Number of Employees: 62,218 (Consolidated) Male: 51,441 / Female: 9,323

\* Gender data for employees has not been collected in certain regions, resulting in discrepancies between total employee counts and the combined totals of male and female employees.

### Share Data (As of March 31, 2024)

Total Number of Shares Authorized to Be Issued	2,298,000,000 shares
Total Number of Shares Issued	639,438,399 shares
Total Number of Shareholders	297,544 persons

### Share Information (As of March 31, 2024)

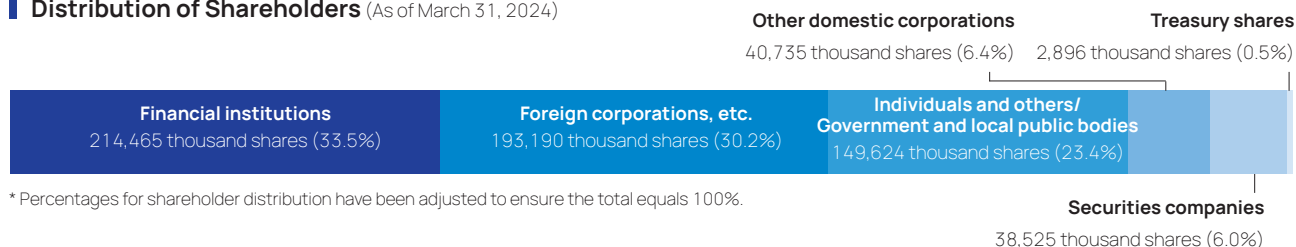
Minimum Trading Unit	100 shares
Fiscal Year-end	March 31 of each year
Stock Exchange Listing	Tokyo Stock Exchange, Inc.
Security Code	5411
Shareholder Registry Administrator	Mizuho Trust & Banking Co., Ltd. 1-3-3 Marunouchi, Chiyoda-ku, Tokyo 100-8241, Japan

### Major Shareholders (As of March 31, 2024)

Name	Number of shares held (Thousand shares)	Shareholding ratio (%)
The Master Trust Bank of Japan, Ltd. (trust account)	88,084	13.84
Custody Bank of Japan, Ltd. (trust account)	41,265	6.48
Nippon Life Insurance Company	15,855	2.49
JFE Employees Stock Ownership Plan	13,096	2.06
JPMorgan Securities Japan Co., Ltd.	12,504	1.96
STATE STREET BANK WEST CLIENT - TREATY 505234	12,464	1.96
Mizuho Bank, Ltd.	9,776	1.54
JFE Business Partners Stock Ownership Plan	9,623	1.51
JP MORGAN CHASE BANK 385781	8,068	1.27
The Dai-ichi Life Insurance Company, Limited	7,679	1.21

Note: The Company retains 2,896 thousand shares as treasury shares. The treasury shares are not included in the shareholding ratio calculation.

### Distribution of Shareholders (As of March 31, 2024)



\* Percentages for shareholder distribution have been adjusted to ensure the total equals 100%.

### Changes in Share Prices, Trading Volume, and Dividends

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Share price (Yen) (As of year-end)	1,943	2,654	1,516	1,909	2,144	1,879	703	1,363	1,723	1,679	2,540
Trading volume (Million shares) (Fiscal year)	1,113	799	1,080	1,141	896	685	823	1,077	2,708	1,384	1,289
Annual dividends per share (Yen)	40	60	30	30	80	95	20	10	140	80	100

## External recognition



**FTSE Blossom  
Japan Sector  
Relative Index**



**FTSE4Good**

[CDP 2023 scores]  
Climate change: A-  
Water security: A-  
Supplier/Engagement: A-



**2024 CONSTITUENT MSCI NIHONKABU  
ESG SELECT LEADERS INDEX**

**2024 CONSTITUENT MSCI JAPAN  
EMPOWERING WOMEN INDEX (WIN)**



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## Tool map

\* Websites referenced in this report may be updated as necessary.

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The JFE GROUP REPORT and JFE GROUP SUSTAINABILITY REPORT can also be viewed on smartphones.



JFE GROUP REPORT



JFE GROUP SUSTAINABILITY REPORT

# JFE Holdings, Inc.

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URL: <https://www.jfe-holdings.co.jp/en/>

