

Strategy to Create Value

The JFE Group is committed to ensuring both environmental and social sustainability, as well as establishing economic sustainability. This section introduces our strategies aimed at realizing further value creation based on initiatives in our Seventh Medium-term Business Plan.

- 15 Strategy to Create Value
- 17 Message from the CEO
- 23 Market Trends and Business Risks and Opportunities
- 25 Material Issues of Corporate Management
- 27 Material Issues of Corporate Management and KPIs
- 31 Progress on the Seventh Medium-term Business Plan (Fiscal 2021–2024)
- 33 Message from the CFO
- 35 Special Feature 1: Electrical Steel Strategy
Strengthen Production of Electrical Steel
- 39 Special Feature 2: Land Utilization in the Keihin Region
Large-Scale Land Conversion to Pave the Way for the Next 100 Years

Create

サステナブル!

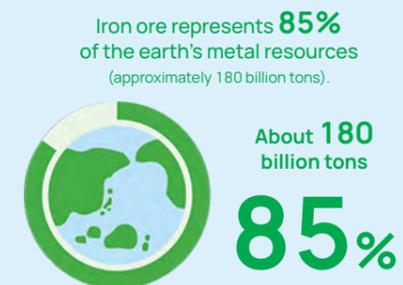
Sus-tetsu-nable!*

* A term unique to our Company, it combines steel and sustainability, both of which are essential to society

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 CO₂ emissions is overwhelmingly lower than other materials, making it an environmentally friendly option.

World's recoverable reserves of iron ore



GHG emissions during material production (per functionally equivalent component)



For more details, please see The Value of Steel P.7-8

Message from the CEO

JFE's Biggest Transformation Ever, Targeting Global Success

Through the completion of structural reforms, we will pivot from quantity to quality and consistently secure high revenue. Simultaneously, we will concentrate the collective strengths of the Group to accelerate the development of decarbonization technologies.



Koji Kakigi

Representative Director,
President and CEO
JFE Holdings, Inc.

Our Vision

The Seventh Medium-term Business Plan was formulated in 2020, a time when the global economy was crippled by the COVID-19 pandemic. In the core steel business, there was a period of uncertainty for the future as demand for steel plummeted, yet it was during this time that we thoroughly discussed and formulated this business plan. As it was unknown when the pandemic would end, we decided to extend the plan from three to four years, with consideration for our post-pandemic future. Since then, significant changes have arisen in society and the world economy, such as the surge in raw material and energy prices after Russia invaded Ukraine, and emerging economic security issues due to the U.S.-China decoupling. However, I am confident that the fundamental direction of this business plan is still on track.

JFE was established in 2002 through the merger of Nippon Kokan and Kawasaki Steel. At the time, as head

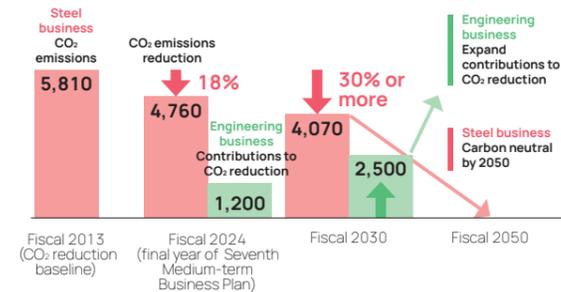
of the human resources department in the steel business company, my feelings of anxiety and elation resonated with the basic stance of the current business plan and its slogan, "JFE's biggest transformation ever, targeting global success." In implementing this plan, our mission has been to be essential to society's sustainable development and to create safe, comfortable lives for people everywhere. With this in mind, we continue to take on challenges aimed at transformation and achieving environmental and social sustainability in addition to economic sustainability. With regard to environmental and social sustainability, our top management priority is to address climate change. To this end, we have formulated the JFE Group Environmental Vision for 2050 with a focus on reducing CO₂ emissions in the steel business, contributing to reduction of CO₂ emissions across the society in technology development while viewing decarbonization as a path to business opportunities.

As for economic sustainability, although we achieved our medium-term targets in fiscal 2021, the first year of the business plan, conditions in the following year, including one-off effects such as inventory valuation differences and rapidly deteriorating economic conditions, prevented

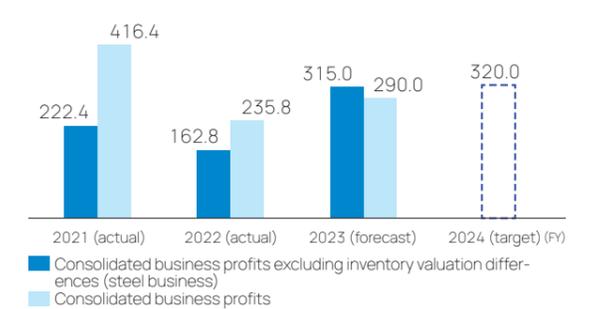
us from reaching our goals in fiscal 2022. I will elaborate on this later, but after completing structural reforms in our core steel business as of September 2023, we are firmly committed to advancing our crucial pivot from quantity to quality and surpassing our future targets.

Despite the rapidly changing business environment, JFE remains committed to achieving sustainable growth under its corporate vision of "contributing to society with the world's most innovative technology."

CO₂ emissions reduction targets (10,000 tons/year)



Consolidated business profits (billion yen)



Review of Fiscal 2022 and Future Outlook

Modest Profit Despite Challenging Conditions in Second Year of Plan

In fiscal 2022, the second year of the business plan, the economy continued to recover from the COVID-19 pandemic. However, the recovery was complicated by the prolonged war in Ukraine, economic stagnation in China, rising concerns about global inflation, yen depreciation, price inflation, and supply constraints. Against this backdrop, business profit in the steel business declined due to factors such as inventory valuation differences and fluctuations in foreign currency exchange rates. Nevertheless, we made steady progress in building a robust revenue structure that is not dependent on volume and market conditions, including by raising prices to pass on the higher costs of primary raw materials and other items, making efforts to increase the sales ratio of high-value-added products, restructuring operations, and renovating blast furnaces.

Regarding price hikes, we improved our spread* by 74 billion yen compared to fiscal 2021 by actively passing on the rising costs of metals, energy, freight, etc., despite the harsh business environment characterized by a slow recovery in domestic steel demand and a slump in overseas steel prices.

* Margin after deducting costs of primary raw materials and other items from selling prices

Outlook for Fiscal 2023 and Fiscal 2024

For fiscal 2023, despite weakness in the overseas steel market, particularly in Asia, we forecast business profit to increase 54.2 billion yen thanks to the completion of structural reforms, price hikes, and the absence of one-off factors that reduced profits in the previous fiscal year. In the steel business, we expect to achieve our initial target of 10,000 yen in profit per ton of steel, excluding inventory valuation differences. Additionally, in the plan's final year, fiscal 2024, we are targeting segment profit of at least 260 billion yen, higher than the current target of 230 billion yen. This will be possible by realizing the full benefits of restructuring, worth about 45 billion yen, as well as launching grain-oriented electrical steel sheet production lines and continuing to increase prices.

Notably, in September 2023 we successfully completed the final phase of our structural reforms to pivot from quantity to quality by suspending upstream processes at our Keihin district as planned. By reducing domestic crude steel production capacity by approximately four million tons annually (about 13% of the total), JFE Steel will cut fixed costs by 45 billion yen and accelerate adjustments to its product mix. Since the steel industry is capital intensive, there was a time when prioritizing volume was the right strategy, but going forward we will focus on increasing sales of high-value-added products for the global market. We will reduce our production of commodity products that are difficult to differentiate in terms of value, and we will significantly reduce production capacity through restructuring. At the same time, we will leverage our technological capabilities to increasingly sell high-value-added products that contribute to customer value and are highly profitable.

Specifically, JFE Steel is steadily increasing its sales ratio of high-value-added products, mainly high-tensile automotive steels, high-alloy seamless steel pipes, automotive wire rods, and high-grade shaped steel for export (shipbuilding). With additional contributions from expanded capacity for non-oriented electrical steel sheet, we are on track to achieve our medium-term target of 50% sales of high-value-added products. In terms of pricing, customers are recognizing that JFE offers value commensurate with prices. We have already exceeded our medium-term target for differences in the margins of commodity versus high-value-added products.

The supply-demand balance for electrical steel used in electric vehicle (EV) motors is likely to tighten as the movement toward vehicle electrification gains momentum worldwide. JFE Steel excels at producing high-grade electrical steel that enables EVs to travel longer distances. The company aims to expand production capacity for top-grade non-oriented electrical steel sheet threefold compared to the current level by expanding its production facilities for electrical steel at the West Japan Works (Kurashiki district) in April 2024 and 2026. The EV market offers promising growth, so JFE Steel is committed to satisfying the needs of automakers with

its world-class technological capabilities (see page 35).

In the engineering business, we aim to achieve our medium-term target for segment profit of 35 billion yen by continuing to win more orders and reliably secure earnings by focusing on countermeasures to rising material and equipment costs for existing projects. In line with our goal to become a leader in this field, we merged our domestic water engineering business with Tsukishima Aqua Solution Co., Ltd. in October 2023. As a company that supports lifestyles and society, our engineering business will also continue to strengthen its competitiveness through M&A, business alliances, etc., targeting revenue of 1 trillion yen by fiscal 2030.

In the trading business, we have consistently strengthened our earnings base, both domestically and internationally, especially in the United States, where the business environment has been favorable. Our trading business achieved record profits in both fiscal 2021 and fiscal 2022. Although a slowdown in our high-performing U.S. business is likely in fiscal 2023, we are forecasting segment profit of 48 billion yen, exceeding our initial target of 40 billion yen, and in the business plan's final year, fiscal 2024, our target is segment profit of 50 billion yen.

Progress with the Seventh Medium-term Business Plan

Striving Toward for Carbon Neutrality

In the previous fiscal year, we disclosed the roadmap for our steel business through 2050, and also announced the possibility of replacing the Kurashiki No. 1 blast furnace with a high-efficiency, large-scale electric arc furnace by around 2027-2030. Moreover, we have introduced converter furnaces in all districts for greater use of steel scrap, which will lead to a significant reduction in CO₂ emissions. In addition, we will expand the capacity of electric arc furnaces in our Sendai Works. In the engineering business, our construction and operation of renewable energy plants and recycling facilities helped Japanese society reduce CO₂ emissions by approximately 580,000 tons compared to fiscal 2021.

To further these initiatives, we decided to link non-financial indicators related to climate change to the performance-based compensation of directors.

In fiscal 2023, JFE Steel decided to introduce electric arc furnaces for stainless steel production at its Chiba facility. With assistance from the government, we are tackling a number of challenges simultaneously, including

carbon recycling blast furnaces*¹ and hydrogen steel-making,*² including the construction of prototype facilities for each technology at Chiba.

For the time being, given our progress in developing ultra-innovative technologies while hydrogen supply remains limited, we will focus on reducing CO₂ emissions by electric arc furnaces and investing in energy conservation. To secure necessary iron resources, we are exploring participation in Emirates Steel Arkan's reduced iron*³ plant project in the United Arab Emirates (UAE), which we hope will provide a low-cost and stable supply base for reduced iron in the future.

It will be a daunting challenge to convert blast furnaces to electric arc furnaces on a large scale in Japan, China, South Korea, India, and other countries in Asia. Moreover, there are uncertainties about supply conditions for renewable energy as well as steel scrap and reduced iron, which are essential for steel production in electric arc furnaces. In addition, electric arc furnaces may not end up being the best technology for producing carbon-free steel on the path to carbon neutrality. This is why it is extremely important to rapidly develop ultra-innovative technologies, such as carbon recycling blast furnaces and hydrogen steelmaking, which may ultimately prove to offer the greatest potential for contributing to carbon neutrality.

In the first half of fiscal 2023, JFE Steel began supplying JGreeX™ green steel, which is made with considerably reduced CO₂ emissions. Tsuneishi Shipbuilding Co., Ltd. has already decided to use JGreeX™ to construct hydrogen-fueled ships, and eight Japanese shipping companies have also decided to adopt it for dry bulk carriers. With our customers having accepted a premium of about 40% for the price of JGreeX™, this is the world's first model for sharing the cost of reduced-CO₂ environmental value across entire supply chains. This business model will be crucial for our sustained growth as we seek to reduce CO₂ emissions through massive investments. We are committed to creating markets where customers recognize the value of green steel as an essential means of realizing a carbon-neutral world.

*1 Insert methane derived from CO₂ emitted from the blast furnace back into the furnace as a reducing agent
*2 Uses hydrogen instead of coal as a reducing agent
*3 High-grade iron ore from which oxygen is removed using natural gas

Commercialization of Offshore Wind Power Business

Our engineering business, aiming to develop its offshore wind power business, has started to construct Japan's first manufacturing plant for monopiles (base structures for wind turbines) in Kasaoka, targeting production from April 2024. Despite some initial setbacks, we have begun marketing large-diameter structural components (not monopiles) for the foundations of offshore wind turbines that can be produced at the Kasaoka plant. In the late 2020s, when offshore wind power construction will gain momentum, we forecast sales of around 40 billion yen as we tap demand mainly in Japan but also overseas.

As materials for the production of monopiles, we plan to produce high-quality, extra-heavy steel plate at the No. 7 continuous casting machine at our West Japan Works (Kurashiki district). These extra-heavy steel plates are even larger than conventional heavy steel plate. As wind turbines become larger to generate more electricity, our extra-heavy steel plates will help reduce production costs and improve labor efficiency by reducing the need for welding. There are only a few steelmakers in the world that can manufacture and deliver such large-size extra-heavy steel plates in sufficient quantities, and JFE Steel is one of the largest in Asia. I believe JFE Steel will be able to leverage its competitive advantages in this regard.

In the trading business, we are utilizing the expertise accumulated in our steel, raw materials, and equipment businesses to build supply chains and offer optimal solutions to customers. Moreover, we are exploring an operation & maintenance (O&M) business for offshore wind power. We anticipate that collaboration among group companies in our steel and engineering businesses will

enable us to leverage our cumulative group knowledge and expertise for the proposed O&M business (see page 59).

Advancing Our DX Strategy

The business environment surrounding JFE is changing at an unprecedented pace and scale. In order to keep pace with these changes nimbly and swiftly, we have been advancing digital transformation (DX) to enhance corporate value over the medium and long term.

In the steel business, we invested 115.0 billion yen in DX in the mid-term, and we are targeting an annual profit improvement of 30 billion yen through the introduction of cyber-physical systems (CPS) for all lines. By the end of fiscal 2022, about 45% of our planned investments had been approved, an indicator of the steady progress we are making. Looking ahead, we will continue to invest in DX initiatives, focusing on their potential to increase earnings. In the next business plan, we intend to further automate and remotely operate facilities through CPS installed on production lines. In our engineering business, we are steadily investing in DX initiatives, reinforcing digital platforms, and utilizing DX to design engineering, procurement, and construction (EPC) projects, which will help us steadily progress toward our goal of a 20% improvement in design efficiency by fiscal 2024 (see page 64).

* Obtains big data from sensors in physical space (equipment and products), analyzes it in cyberspace via various methodologies, and feeds the results back into physical space in real time

Land Reuse in the Keihin District

Since the suspension of upstream processes in September 2023, JFE has been working in earnest to reuse its 222 hectares of land in Ohgishima along the waterfront of Tokyo Bay in Kanagawa Prefecture. In response to an administrative policies on land use in the area announced by Kawasaki City in August 2023, we published our "OHGISHIMA 2050" vision, based on which we are working with government agencies to explore possible ways to reuse the land, such as for carbon-neutral energy generation in Lead area or other diverse uses (see page 39).

Progress to date includes specific projects in the Ohgimachi area and in Minami-watarida north area. Looking ahead to future development, we are considering taking gains on land sales or land leasing income, or the discussion use of public funds for land development. While leveraging the characteristics of each area, we will advance initiatives along three avenues, namely, land sales, land leasing, and business use, with the objective of maximizing corporate value.

Progress with Growth Strategies

Overseas Strategies and Solutions Business

In the steel business, JFE is targeting growth centered on quality instead of quantity through a strategic reallocation of corporate resources, with a special focus on overseas markets, especially in Asia, where demand for steel is expected to strengthen.

India, a country with prospects for rapid growth, is an extremely attractive market, including because of barriers to importing steel from China. As needs for electricity quickly expand, we are likely to see strong demand for grain-oriented electrical steel sheet used in transformers. JFE, which has long sought to localize its production and sale of grain-oriented electrical steel sheet in India, recently entered into an agreement with JSW Steel, a major steelmaker, to establish a 50:50 joint venture for the production and sale of steel sheet. By teaming up with this trusted partner with a deep understanding of local conditions, JFE Steel will combine this “insider advantage*” with advanced technological capabilities to meet growing demand in India. Once the joint venture is established, construction of a local steel plant will commence, aiming at full production from fiscal 2027. Thereafter, production capacity will be expanded as required to meet local demand for steel (see page 37).

In addition, executives from JFE and Nucor, the largest steelmaker in the United States, have been communicating closely about a new growth proposal that combines their mutual strengths. JFE already has a close relationship with Nucor through Nucor-JFE Steel Mexico (NJSM) in Mexico and in cooperation with U.S. steelmaker CSI.

In the solutions business, a promising new business model, revenue is expected to triple from fiscal 2020 to fiscal 2024, including expanding by more than 150% in fiscal 2022 and at least 200% (target) in fiscal 2023. In the longer term, we expect to commercialize promising products developed with advanced technologies centered on CPS and safety.

In the engineering business, we are developing overseas markets, mainly in Asia, a key region. In the environmental field, we aim to expand earnings by advancing into facility operations for public-private, power generation, electricity, and recycling projects, in addition to reinforcing the competitiveness of existing projects through our engineering bases in India, the Philippines, and elsewhere in Asia. In the field of core infrastructure, JFE is keen to increase orders for chemical plants by leveraging synergies with JFE Project One Co., which

became a subsidiary via M&A. For bridges and other steel structures, we expect to win projects not only in Asia but also in fast-growing Africa.

In the trading business, fiscal 2022 saw us expand various plants and processing facilities, such as press machines, at our processing bases in Japan, China, and Canada, aiming to meet envisioned growth in demand for electrical steel. Our trading business is building out its global processing and distribution structure with the intention of becoming a world leader in this field. In the building materials field, we acquired a U.S. manufacturer and distributor of steel sheet building materials to secure related demand for steel sheet in the expanding North American market. We will continue to pursue such growth strategies and strengthen our supply chain through Group collaboration in order to increase JFE’s market presence and earnings.

* “Insider advantage” means to invest in leading, locally trusted partners in overseas markets, and process and sell locally produced steel in local markets

Human Resources Management

We have formulated the JFE Group’s Basic Policy on Human Resource Management and the JFE Group Health Declaration to guide our efforts in drawing out the best in employees by investing in our human resources.

Amid a rapidly changing business environment, we are combining various value systems and ways of thinking to develop new ideas and methods for personnel management that can be translated into increased corporate value. JFE values diversity and inclusion and strives to create work environments where people of diverse backgrounds, including gender, nationality, value systems, and lifestyles, can maximize their abilities. To further empower women, based on input from the Board of Directors we decided to set ambitious key performance indicators (KPIs) for women in managerial positions and female hiring ratios in fiscal 2022. Each operating company sets and enacts policies for diversity and inclusion based on discussions with management. We are implementing a variety of measures to recruit more female candidates for managerial positions, retain personnel by expanding internal and external networking opportunities and providing role models, and place and develop female employees through individual training initiatives.

In addition, to enable our diverse employees to realize their capabilities and potential, we are working to create internal environments in which employees can feel a sense of job satisfaction. JFE Holdings and its operating companies each conduct an annual engagement survey to gauge employee awareness, identify issues related to job satisfaction, and consider any necessary remedial measures.

Maintaining safe work environments and preventing occupational injuries are essential to ensuring that our employees can work with confidence. Starting with the basic principle of putting safety first, JFE sets safety-related KPIs and implements measures to ensure safety. The current business plan includes priority investments in safety measures worth around 10 billion yen per year

Groupwide, striving to adopt the latest technologies and continue with ongoing safety activities to prevent equipment and other work-related injuries. Also, to minimize occupational injuries in fiscal 2022, JFE introduced a safety-related metric linked to the performance-based compensation of directors.

Capital Market’s Evaluation of JFE

JFE Holdings’ share price is one of the Company’s key management indicators, based on which the current business plan targets a return on equity (ROE) of at least 10% above the cost of shareholders’ equity. While the Company believes this target is achievable by fiscal 2024, so far capital markets have a different view of our ability to achieve this target.

It seems the market is not convinced that JFE can reliably maintain its ROE above the cost of shareholders’ equity going forward, due to factors such as earnings volatility in the steel business, increasing uncertainty related to Japan’s declining birthrate, and the global need to decarbonize.

It is imperative that we clearly convey to the public that we have transformed JFE’s structure to generate stable, high-level earnings by shifting from quantity to

quality under our current business plan. Moreover, we will advance our overseas strategy as a source of growth and formulate business models that enable us to grow and generate profits overseas, particularly the expanding markets of India and North America. However, since it will take time to develop ultra-innovative technologies for decarbonization, we will strive to disclose information in a detailed and easy-to-understand manner, including our progress in developing such technologies and their expected impact on society.

There is no doubt that steel, which is produced about 1.9 billion tons a year worldwide, is an essential material for the development of the global economy and human society. As a company that provides products and services centered on steel, we are keenly aware of the need to quickly develop technologies necessary for decarbonization in an economically sustainable manner. JFE, aiming to turn this challenge into an opportunity, will mobilize its collective capabilities to rapidly develop decarbonization technologies.

In Conclusion

In 2022, JFE Holdings celebrated the 20th anniversary of the merger of Nippon Kokan and Kawasaki Steel. With this milestone in mind, at the end of 2022 we launched an ad campaign in Japan with the tagline “Sus-tetsu-nable,”** which embodies our ambition to be an irreplaceable presence on the path to a sustainable world. The initiative is aimed at not only raising awareness of JFE among as many people as possible but also attracting more talented people to work with us and help JFE grow. Through this campaign, we hope to convey to employees who will carry us into the future, as well as to students who may join us in the future, that we offer them almost limitless opportunities to contribute to the world through

our work with steel. Young employees who have seen the commercials have responded positively, saying that it reinforces their understanding of how important their work is from a societal perspective. Going forward, with the goal of being an irreplaceable presence on the path to a sustainable world, we are committed to working with our employees to enhance our corporate value and communicate our vision of where we are going and how we will get there. I thank you for your understanding and support as the JFE Group continues onward.

* A term unique to our Company, it combines steel and sustainability, both of which are essential to society

Koji Kakigi

Representative Director,
President and CEO

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

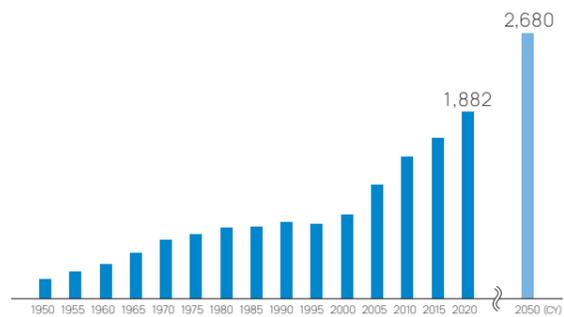
- 1) Optimize production volume in tandem with changes in supply-demand balance for steel in Japan and overseas
- 2) Build an optimal production structure by retiring and consolidating facilities
- 3) Enhance cost competitiveness through strategic investments
- 4) Increase sales ratio of technologically advanced products
- 5) Produce steel locally by investing in overseas steelmakers and a vertically integrated structure overseas

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

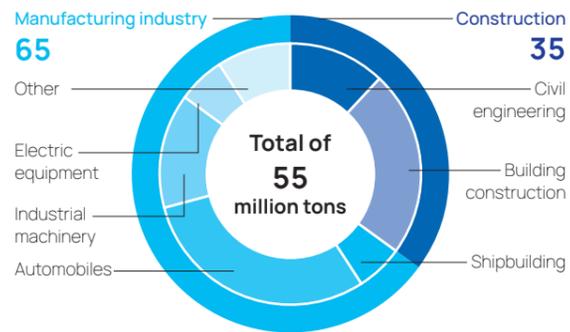
(million tons)



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 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 becoming carbon neutral by 2050. In

light of changes in society, we are constructing a new factory to manufacture foundational structures attached to the seabed (monopiles) for offshore wind power generation, and aim to commence production in April 2024. We are also proactively developing CO₂ 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 changes in external environment | Risks | Opportunities |
|---|--|---|
| Climate change problem ▶ Helping to Resolve Issues Related to Climate Change P.57 | <ul style="list-style-type: none"> Sharply growing needs for decarbonization of (blast furnace) steelmaking process Higher burden of investments to introduce ultra-innovative technologies Carbon tax Disruptions to supply chains from natural disasters Risk of flooding of bases due to rising sea level Competition from other materials Tougher environmental regulations | <ul style="list-style-type: none"> Development of ultra-innovative technologies and securing of competitive advantages Contribution to reduction of CO₂ emissions by supplying high-performance steel, such as high-tensile steel and electrical steel Expansion of electric arc furnace steelmaking and electric arc furnace engineering business Stronger demand for renewable energy solutions Stronger response to disasters caused by climate change |
| Resource and energy problems ▶ Business Strategies P.47 | <ul style="list-style-type: none"> Depletion of resources, harder to obtain raw materials and equipment, rising prices Higher prices for scrap waste, harder to obtain materials, lower grade ores Risk of depletion of water resources, risk of pollution at drainage sites | <ul style="list-style-type: none"> Renewed attention on recyclability of steel Expansion of logistics business and opportunities to use scrap Stronger waste-to-resource demand (plastic recycling, power generation with food waste) |
| Falling birthrate and aging population in Japan ▶ Promotion of DX P.64 ▶ Securing and Training Diverse Talent P.65 | <ul style="list-style-type: none"> Labor shortage Disruptions of skill transfer to next generation Weaker domestic demand for steel Decrease in EPC orders and projects due to shrinking private-sector investment | <ul style="list-style-type: none"> Secure talented personnel with work-style reforms Introduce new technologies to reduce personnel and save labor (stronger needs for automation, remote monitoring) |
| Globalization of markets, development of emerging countries ▶ Business Strategies P.47 | <ul style="list-style-type: none"> Expansion of steel production capacity in emerging countries Constraints on export transactions due to higher duties and import restrictions Country risk, impact from higher commodity prices and foreign exchange fluctuations | <ul style="list-style-type: none"> Increase in demand for steel in growth markets Greater use of high-value-added products Increase in infrastructure projects in emerging countries |
| Aging of infrastructure facilities ▶ Business Strategies P.47 | <ul style="list-style-type: none"> Impact from accidents and larger damage from natural disasters due to aging infrastructure Contraction in domestic public utilities business from transition to preventive maintenance | <ul style="list-style-type: none"> Stronger demand for infrastructure renewal, including reinforcement against natural disasters Provision of high-quality products and services to meet demand for longer-living infrastructure Business expansion from privatization of public services |
| Development of AI and IoT technologies ▶ Promotion of DX P.64 | <ul style="list-style-type: none"> Information leaks and system damage due to cyberattacks and illicit use of systems | <ul style="list-style-type: none"> Creation of new value added and expansion of service offerings with DX and AI |

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

FY2016: Identifying material CSR issues

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

FY2021: 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 2022, 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 2022 KPIs

for material issues of corporate management were deliberated and evaluated, and fiscal 2023 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.

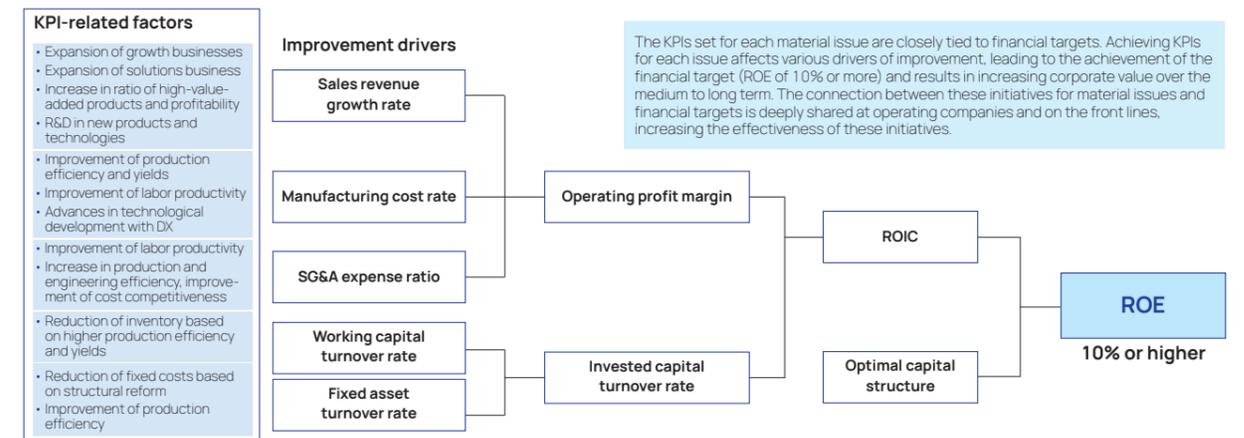
Sustainability promotion structure



| | Areas of Focus | Details | Material Issues | Relevant SDGs |
|-------------------|--|---|---|---------------|
| Activity | Contribute to resolving climate change issues (initiatives for achieving carbon neutrality by 2050) → P.57 | <ul style="list-style-type: none"> ● Initiatives for achieving carbon neutrality by 2050 • Reduce the JFE Group's CO₂ emissions • Contribute to reduction of CO₂ emissions in society | <ul style="list-style-type: none"> • Reduce the JFE Group's CO₂ emissions • Contribute to reduction of CO₂ emissions across the society | |
| | Ensure occupational safety and health → P.87 | <ul style="list-style-type: none"> ● Prioritize safety first ● Maintain the physical and mental health of employees and their families | <ul style="list-style-type: none"> • Prevent workplace accidents • Ensure the health of employees and their families | |
| | Recruit and nurture diverse human resources → P.65 | <ul style="list-style-type: none"> ● Maintain work environments where all personnel can maximize their abilities ● Accumulate and hand down technologies and skills | <ul style="list-style-type: none"> • Pursue diversity and inclusion • Strengthen human resources development • Create workplaces that motivate employees | |
| | Reinforce resilience of production and engineering capabilities (realize world-class earnings power through DX and other measures) → P.64 | <ul style="list-style-type: none"> ● Pursue world-class earnings power ● Promote DX and other measures to improve production efficiency, yields, and labor productivity • Shift focus of steel business from quantity to quality (structural reform) • Reduce costs to strengthen cost competitiveness and ensure quality competitiveness | <ul style="list-style-type: none"> • Increase efficiency and enhance cost competitiveness in production and engineering • Raise quality of products and services and ensure reliable supply | |
| | Strengthen competitiveness of products and services (promote the growth strategy by providing high-value-added solutions) | <ul style="list-style-type: none"> ● Improve margins and ensure stable earnings power • Increase ratio of high-value-added products and services • Ensure stable earnings power based on the sales strategy, including technological solutions and expansion of growth businesses | <ul style="list-style-type: none"> • Expand business by increasing value added in products and services with advanced technologies • Sales strategies for realizing sustainable growth | |
| Basis of Activity | Thoroughly enforce compliance → P.84 | | <ul style="list-style-type: none"> • Ensure adherence to corporate ethical standards and compliance | |
| | Respect human rights → P.89 | | <ul style="list-style-type: none"> • Respect human rights across the supply chain | |

▶ Please see page 27 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.

■ Groupwide ■ JFE Steel ■ JFE Engineering ■ JFE Shoji

| Evaluation criteria | | ○ | △ | × |
|---------------------|--|--|---|---|
| Quantitative | Target attributes | Accomplished 100% or better | Accomplished 80%-99% | Accomplished 79% or less |
| | Set for each fiscal year | 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 | Set medium- to long-terms (in case of setting a multi-year target) | 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)

| Areas of Focus | Material Issues | Operating Company | FY2022 KPIs | Initiatives and Results for FY2022 | Assessment | FY2023 KPIs | |
|---|---|---|--|--|--|--|---|
| Activity | Contribute to resolving climate change issues (initiatives for achieving carbon neutrality by 2050) | Reduce the JFE Group's CO ₂ emissions | JFE Steel | <ul style="list-style-type: none"> Achieve 50% of the CO₂ reduction target from energy conservation and technological development for the target of reducing CO₂ emissions by 18% from FY2013 levels by the end of FY2024 Complete the approval of investment plans for reducing CO₂ emissions by 90% cumulatively for CO₂ reduction targets from energy conservation and technological development for the target of reducing CO₂ emissions by 18% from FY2013 levels by the end of FY2024 Formulate a CO₂ reduction plan aimed at realizing the CO₂ reduction target for FY2030 (30% or more) with an eye on achieving carbon neutrality by 2050 | <ul style="list-style-type: none"> CO₂ reduction target: 58% achieved Total investment budget: 88% approved CO₂ reduction target: Set multiple targets that anticipate future changes in the environment | ○ | <ul style="list-style-type: none"> Achieve 75% of the CO₂ reduction target from energy conservation and technological development for the target of reducing CO₂ emissions by 18% from FY2013 levels by the end of FY2024 Complete the approval of capital investment plans for reducing CO₂ emissions by 100% cumulatively for CO₂ reduction targets from energy conservation and technological development for the target of reducing CO₂ emissions by 18% from FY2013 levels by the end of FY2024 Obtain third-party certification, and build a green steel supply structure in the first half of FY2023 |
| | | | JFE Engineering | <ul style="list-style-type: none"> Reduce CO₂ emissions in its own plants and offices FY2024: 40% reduction from FY2013 levels | <ul style="list-style-type: none"> 48% reduction from FY2013 levels (FY2013: 15,600 tons, FY2022: 8,100 tons) | ○ | <ul style="list-style-type: none"> Reduce CO₂ emissions in its own plants and offices FY2023: 40% reduction from FY2013 levels |
| | | | JFE Shoji | <ul style="list-style-type: none"> Reduce CO₂ emissions through the procurement of electricity derived from renewable energy FY2022 domestic CO₂ emissions: Reduce by 10% from FY2019 levels (Reduce by 5% per year from FY2019 levels from FY2021 to FY2024) | <ul style="list-style-type: none"> 11.2% reduction from FY2019 levels | ○ | <ul style="list-style-type: none"> Reduce CO₂ emissions through the procurement of electricity derived from renewable energy FY2023 domestic CO₂ emissions: Reduce by 15% from FY2019 levels (Reduce by 5% per year from FY2019 levels from FY2021 to FY2024) |
| | | Contribute to reduction of CO ₂ across the society | JFE Steel | <ul style="list-style-type: none"> 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) *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. | <ul style="list-style-type: none"> FY2022: 16 (eco-friendly products: 7, technologies: 9) (FY2021-FY2024: 32) | ○ | <ul style="list-style-type: none"> 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 FY2022 to FY2024) *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. |
| | | | JFE Engineering | <ul style="list-style-type: none"> Contribute to reduction of CO₂ in society by providing renewable energy power generation facilities and expanding the basis of the recycling business (for plastic, food, etc.) Contribute to reduction in CO₂ emissions (FY2022): 1.1 million tons per year | <ul style="list-style-type: none"> CO₂ reduction contribution (FY2022): 11.14 million tons/year | ○ | <ul style="list-style-type: none"> Contribute to reduction of CO₂ in society by providing renewable energy power generation facilities and expanding the basis of the recycling business (for plastic, food, etc.) Contribute to reduction in CO₂ emissions (FY2023): 11.5 million tons per year |
| | Ensure occupational safety and health | Prevent workplace accidents | Groupwide | <ul style="list-style-type: none"> Workplace fatalities: Zero occurrences Lost-workday injuries rate 0.10 or less 0.25 or less 0.45 or less | <ul style="list-style-type: none"> Workplace fatalities: 1 occurrence Lost-workday injuries rate 0.18 0.26 0.25 | ○ | <ul style="list-style-type: none"> Workplace fatalities: Zero occurrences Lost-workday injuries rate 0.10 or less 0.25 or less 0.45 or less |
| | | | JFE Steel | <ul style="list-style-type: none"> [Key measures] (1) Enhance safety Install electromagnetic locks at the secondary mill entrances: 60% by FY2022, 100% by FY2024 (2) Restructure the safety and health management system ISO 45001 certification in all districts: 100% by FY2022 | <ul style="list-style-type: none"> [Key measures] 1) Installed electromagnetic locks at the secondary mill entrances: 81% 2) ISO 45001 certification: 100% | ○ | <ul style="list-style-type: none"> [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 | <ul style="list-style-type: none"> [Key measures] (1) Implement 100% of the following key points for eliminating falling and tumbling, getting wedged between or caught in machinery, and being struck by flying or falling objects <ul style="list-style-type: none"> 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) Strict adherence during operations (use of safety belts, no entry measures/allocation of worksite guides) (2) Multifaceted management of occupational safety and health using IT <ul style="list-style-type: none"> Complete development of an AI-based system for detecting intruders (plan) | <ul style="list-style-type: none"> [Key measures] 1) Focused efforts on pre-operation checks of work plans and offering guidance, checking safety equipment, and preventing unsafe behavior through patrols in order to implement 100% of the following key points for eliminating falling and tumbling, getting wedged between or caught in machinery, and being struck by flying or falling objects (Workplace fatalities: 1 occurrence in FY2021 → Zero occurrences in FY2022) 2) Multifaceted management of occupational safety and health using IT Finished development of AI-based system for detecting intruders (began operating a plant hardened system at Tsurumi Works in FY2023) | × | <ul style="list-style-type: none"> [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"> 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) Strict adherence during operations (use of safety belts, no entry measures/allocation of worksite guides) (2) Multifaceted management of occupational safety and health using IT <ul style="list-style-type: none"> Monitor worksites, use information communications systems Use safety management operations support system |
| | | | JFE Shoji | <ul style="list-style-type: none"> [Key measures] (1) Installation of safety fences, covers, etc. (100% of plan) (2) 100% implementation of crane operation drills (once a year or more at each company) | <ul style="list-style-type: none"> [Key measures] 1) Installation of safety fences and covers: Completed 100% of plan 2) Implementation of crane operation drills: Once a year or more at each company; Implemented 100% of drills | ○ | <ul style="list-style-type: none"> [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 | Groupwide | <ul style="list-style-type: none"> 1. Provision rates of healthcare guidance 60% (2023 target) 2. Reduce rates of smokers (ensure employee health and prevent exposure to passive smoke) 1.5% reduction per year (total for operating companies) | <ul style="list-style-type: none"> 72.2% 39.4% 52.1% *FY2021 results 0.7% reduction per year (total for operating companies) | × | <ul style="list-style-type: none"> 1. Provision rates of healthcare guidance 60% (2023 target) 2. Reduce rates of smokers (ensure employee health and prevent exposure to passive smoke) 1.5% reduction per year (total for operating companies) |
| Recruit and nurture diverse human resources | Pursue diversity and inclusion | Groupwide | <ul style="list-style-type: none"> 1. Rates for female recruits Career-track (white-collar position): Degree of gender parity Career-track (technical position): 10% or more On-site position: 10% or more Career-track (white-collar position): Degree of gender parity Career-track (technical position): 15% or more Production/construction position: 10% or more (four-year average) Career-track position: Degree of gender parity 2. Women in managerial positions 10% or more in the position qualified as section manager or above. Of whom, 20% or more to be in management and sales departments (FY2030 target) 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 | <ul style="list-style-type: none"> 1. Rates for female recruits Career-track (white-collar position): 24% Career-track (technical position): 6% On-site position: 6% Career-track (white-collar position): 47% Career-track (technical position): 18% Production/construction position: 4% (four-year average) Career-track position: 42% (2) Women in managerial positions 3.3% in the position qualified as section manager or above. Of whom, 6.1% in management and sales departments (total for operating companies) 93% (total for operating companies) | × | <ul style="list-style-type: none"> 1. Rates for female recruits Career-track (white-collar position): Degree of gender parity Career-track (technical position): 10% or more On-site position: 10% or more Career-track (white-collar position): Degree of gender parity Technical (Career-track, Production/construction position): 15% or more White-collar position: Degree of gender parity 2. Women in managerial positions 10% or more in the position qualified as section manager or above. Of whom, 20% or more to be in management and sales departments (FY2030 target) 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 | |
| | | | Strengthen human resources development | <ul style="list-style-type: none"> Training hours per person 40 hours or more per year 20 hours or more per year 20 hours or more per year | <ul style="list-style-type: none"> Training hours per person 45.2 hours per year 20.9 hours per year 20.1 hours per year | ○ | <ul style="list-style-type: none"> Training hours per person 40 hours or more per year 20 hours or more per year 20 hours or more per year 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 workplaces that motivate employees | Groupwide | <ul style="list-style-type: none"> 1. Annual leave acquisition rate of 75% or more (total for operating companies) 2. Engagement survey Affirmative response to questions about motivation: 75% or more | <ul style="list-style-type: none"> Annual leave acquisition rate: 82% (total for operating companies) Affirmative response to questions about motivation 72% 79% 78% | ○ | <ul style="list-style-type: none"> 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% | |

Material Issues of Corporate Management and KPIs

■ Groupwide ■ JFE Steel ■ JFE Engineering ■ JFE Shoji

| Areas of Focus | Material Issues | Operating Company | FY2022 KPIs | Initiatives and Results for FY2022 | Assessment | FY2023 KPIs |
|----------------------|--|--|--|---|--|---|
| Activity | Reinforce resilience of production and engineering capabilities (realize world-class earnings power through DX and other measures) | JFE Steel | 1. Improve labor productivity Toward improving labor productivity by 20% by the end of FY2024 • Steadily implement FY2022 milestones for improving labor productivity and enhance the accuracy of plans for FY2023 and FY2024 • Approve and implement FY2022 investments for improving labor productivity, such as automation and remote operation • Steadily consolidate the steel sheet manufacturing line for cans in Chiba | • Set milestones and number of personnel for each fiscal year • Implementing measures to improve labor productivity by 20% (48% progress toward 50% target with linear interpolation) • Approved 4.8 billion yen for 38 projects as planned for investments to improve labor productivity through automation and remote operations in FY2022 • Relocated facilities as planned in line with stoppage of can steel sheet manufacturing line at Chiba in September 2022 | △ | 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 operation • Steadily relocate facilities in accordance with structural reforms in Keihin |
| | | JFE Engineering | 2. Improve yields with DS* activities Achieve stable quality and enhance yields through measures including introduction of quality prediction technology based on integrated data encompassing the entire process from steelmaking to final processing using DS Improve yields by 1.0% in FY2022 from FY2020 levels to achieve 2.0% by FY2024 (based on figures after adjustments to the sales mix) * Data science | Improve yields with DS activities FY2022 yield: 86.5% (up 0.4 point from FY2020) | × | 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) |
| | Raise quality of products and services and ensure reliable supply | JFE Steel | • Increase the efficiency of engineering operations by introducing DX technologies Engineers for big data analysis utilizing Pla'cello*: 1,800 * Pla'cello: Proprietary data analysis platform using AI | • About 1,950 employees (FY2021: About 1,500 employees) | ○ | • 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 |
| | | 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 • Establish automated technology for testing and inspections (impact test fracture rate, hole expansion, etc.) other than the four priority items (tensile test, molten steel analysis, thickness measurement for hot and cold rolled steel sheets, and coating weight measurement) to improve the level of quality assurance and product testing | • Took steps as planned to improve awareness of quality and compliance among JFE and Group company employees • Finished automation of four priority items in FY2021 In testing and inspections of areas other than four priority items, successfully measured impact test fracture rate in FY2022 | ○ | 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 Targeting six companies: 67% introduction ratio in FY2023 (100% in FY2025) |
| | | JFE Engineering | 2. Strengthen the manufacturing infrastructures using DX Achieve CPS* installation rate of 36% or more on a companywide basis in FY2022 to implement CPS in all production processes by the end of FY2024. * CPS: Cyber-Physical System | • Companywide CPS installation rate: 35% | △ | 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 |
| | | JFE Engineering | 1. Secure a stable number of certificated managing engineers 2. No major quality problems | (1) Reliably secured certificated managing engineers amid high level of sales (2) Major quality problems: One incident | ○ | 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) | JFE Shoji | 1. Make consistent investment in processing and distribution operations 2. Conduct quality audits at Group companies Continue conducting quality audits at 36 Group manufacturing affiliate companies in Japan (expand the scope from the FY2021 level) and overseas (audit completed: 100%) | (1) Made necessary investments during the fiscal year to ensure reliable supply of products [Investment amount (approved amount)] • Reinforcement: 11.3 billion yen • Renewal and safety: 3.1 billion yen • Systems: 1.6 billion yen Total: 16.0 billion yen Conducted 36 quality audits (100% audit completion rate) 18 domestic Group companies (zero remote audits) 18 overseas Group companies (five remote audits) | ○ | 1. Make consistent investment in processing and distribution operations 2. Conduct quality audits at Group companies Continue conducting quality audits at 36 Group manufacturing affiliate companies in Japan (same as the FY2022 level) and overseas (audit completed: 100%) |
| | | JFE Steel | 1. Pursue strategic research and development focusing on priority development fields* Develop new products and technologies FY2022: 20 or more cases (80 or more cases in total from FY2021 to FY2024) * Automobiles, energy, infrastructure construction materials, DX technology, and green transformation (GX) technology 2. Increase sales ratio of high-value-added products* to 50% by FY2024 (Sell 10.9 million tons of these products, or 50% of total sales volume, excluding semi-finished products, in FY2024) Sales of high-value-added products: 10.3 million tons (sales ratio of 47%) (up 2.5 million tons from FY2020) * Products that offer technological advantages and are recognized by customers for their added value while having greater earnings power than commodity products. 3. As a step toward triple earnings in the solution business by FY2024 from the FY2020 level • Continuing from FY2021, focus efforts on activities for receiving orders for the new solutions model; In particular, along with concluding a contract for the first project providing DS utilization technologies via the cloud, build a platform that provides services on a subscription basis • In the existing solutions business, expand product offerings and develop new customers while increasing revenue in FY2022 by 50% from FY2020 levels by steadily executing projects | FY2022: 22 cases (10 new products, 12 new technologies) (Total for FY2021 to FY2024: 43 cases) Sales ratio for high-value-added products in FY2022: 47% | ○ | 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 High-value-added product sales volume ratio in FY2023: 48% |
| | Sales strategies for realizing sustainable growth | JFE Engineering | • Develop technologies in four priority fields of waste to resources, carbon neutrality, combined utility services, and DX, and 65% or more of R&D expenses on these four fields • Number of patent applications: 80 or more per year | • Ratio of R&D spending in four priority fields: 72% • Number of patent applications: 88 | ○ | • 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. • 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 4,000 yen per tons by FY2024 (revise evaluation method eliminating the impact of market fluctuations and product mix differences) <FY2022 KPI> Aim for 50% of target | Expanded the earnings difference between high-value-added products (A-rank products) and commodity products to 6,000 yen per ton in FY2022 (achieving 150% of FY2024 target) | ○ | Expand the earnings difference between high-value-added products (A-rank products) and commodity products to 6,000 yen per ton (Achieve 150% of FY2024 target) |
| JFE Engineering | | Expand the stable earnings base Expand the operating businesses • Sales: 255 billion yen • Expand bases: 3 or more bases Recycling business (food, plastics, electronic appliances, etc.), regional electricity retail new power business, waste processing business, and water and sewage operations business | • Sales of operating businesses: 272.5 billion yen • New bases: 3 bases 1 regional electricity retail new power business base, 1 waste recycling base, 1 waste-water processing base | ○ | Expand the stable earnings base Expand the operating businesses • Sales: 260 billion yen • Expand bases: 3 or more bases Recycling business (food, plastics, electronic appliances, etc.), regional electricity retail new power business, and waste processing business | |
| Basis of Activity | Thoroughly enforce compliance | Groupwide | 1. Steady execution of training to foster and maintain a sense of compliance (100% attendance from the target audience) | (1) 100% attendance (rank-based compliance training, training on different laws and regulations, etc.) (2) Conducted Corporate Ethics Awareness Survey of all employees, survey results verified improvement in employee awareness Questions: Has your own awareness increased of the Company's improved compliance systems and initiatives? FY2019 FY2022 Are you aware of the consultation service and how to use it? 70.0% 73.4% Do you agree with and implement the Company's policies regarding power harassment? 70.7% 76.2% Do you manage your work hours in accordance with Company policy? 88.0% 90.3% | ○ | 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 (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 | Groupwide | 1. 100% attendance from the target audience for human rights awareness training | (1) 100% participation rate (2) Implemented the following initiatives: • Revised the JFE Group Human Rights Basic Stance • Expanded human rights due diligence to Group companies • Inspected and made necessary changes to procurement guidelines of each operating company | ○ | 1. 100% attendance from the target audience for human rights awareness training |
| | | | 2. Implement human rights due diligence | | ○ | 2. Implement human rights due diligence |

Progress on the Seventh Medium-term Business Plan (Fiscal 2021–2024)

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

In fiscal 2022, CO₂ emissions in the steel business were reduced by approximately 13% compared to fiscal 2013. Additionally, through the expansion of plant construction and operation businesses in renewable energy power generation and waste-to-energy power generation in the engineering business, JFE's contribution to the overall reduction of CO₂ emissions in society reached 11.14 million t-CO₂, marking steady progress toward the achievement of targets in its medium-term business plan. In the steel business, we have formulated a more detailed CO₂ emissions reduction plan, defining the period up to 2030 as the transition phase for advancing the conversion to a low-carbon steelmaking process, and the period thereafter as the innovation phase to establish and implement ultra-innovative technologies aimed at achieving carbon neutrality. With an eye on the goal of reducing CO₂ emissions more than 30% by fiscal 2030, JFE has introduced the eco-friendly Double-slag Refining Process (DRP®), a converter-type, molten-iron pretreatment process, in all of its districts to increase the use of scrap in converters. JFE has also decided to upgrade the electric arc furnaces at Sendai Works and introduce electric arc furnaces in the stainless steel production process at facilities in the Chiba

district. Toward achieving carbon neutrality by 2050, we are advancing the development of ultra-innovative technologies on multiple fronts, and have commenced construction work on a test furnace for carbon recycling blast furnaces in the Chiba district. We have also decided to start supplying green steel (JGreeX™), which reflects the amount of emissions reduced by our CO₂ emissions reduction technologies, with plans to supply approximately 200,000 tons of green steel in fiscal 2023. In contributing to the overall reduction of CO₂ emissions in society, JFE has decided to invest in tripling its domestic production capacity for electric steel sheets in the Kurashiki district. JFE has also reached an agreement with JSW Steel Ltd. in India to set up a manufacturing and sales company for grain-oriented electrical steel sheet. Additionally, the entire Group is focused on the commercialization of offshore wind power generation, including the expansion of renewable energy power generation businesses in the engineering business. To prepare the manufacturing and supply structure for bottom-fixed foundation structures, JFE has commenced construction on a monopile production plant in Kasaoka City, Okayama Prefecture.

| | FY2022 results | End of FY2024 | FY2030 | FY2050 |
|--|--------------------|--------------------|--------------------|-------------------|
| CO ₂ emissions reduction (Steel business) (vs. fiscal 2013) | Approx. 13% | 18% | 30% or more | Carbon neutrality |
| Contributions to CO ₂ emissions reduction in society (Engineering business) | 11.14 million tons | 12.00 million tons | 25.00 million tons | — |

2 Pursue World-class Earnings Capabilities in Transition from Quantity to Quality in the Domestic Steel Business

In fiscal 2022, the JFE Group steadily advanced key measures toward establishing economic sustainability. We worked to rapidly reflect raw material costs in our selling prices, pass through higher commodity prices, review extras, and adjust price levels. The ratio of high-value-added products increased by two percentage points from the previous fiscal year, to 47%, marking steady progress toward the target of 50% in our medium-term

business plan. In terms of structural reforms, we halted operations at facilities in the Chiba district in order to consolidate operations in steel for cans in the Fukuyama district. We are also steadily renovating blast furnaces in the Chiba district. Regarding land utilization in the Keihin district, management has decided to sell the land in Ohgimachi, and selected a business partner for the Minamiwarida area in the Keihin district.

| Measure | FY2022 Results | Medium-term Business Plan (FY2024) |
|------------------------------------|---|---|
| Cost reductions | ¥45 billion achieved (Total through FY2022) | ¥120 billion |
| Ratio of high-value-added products | 47% (FY2020: 40%) | 50% |
| Increase selling prices | Passed higher costs onto selling prices, in addition to executing measures in the medium-term business plan | <ul style="list-style-type: none"> Quickly reflect cost of main raw materials in selling prices Started extra improvement activities, revised some prices |
| Finished restructuring | <ul style="list-style-type: none"> Halted operations at facilities in the Chiba district in order to consolidate operations in steel for cans in the Fukuyama district Made better use of land in the Keihin district (decided to sell land in Ohgimachi, selected business partner for the Minamiwarida area in the Keihin district) | Major cuts in fixed costs, increase labor productivity, improve product mix |
| Per-ton profit | 7,000 yen/ton (actually* 3,000 yen/ton) | 10,000 yen/ton |

* Excluding inventory valuation differences, raw material carryover, and foreign exchange translation differences

3 Progress on Growth Strategy

► For more information about our initiatives in each business, see pages 47–55.

Steel business

- Decided on additional expansion of electrical steel production facilities at West Japan Works (Kurashiki district) (May 2023)
- Agreement reached in August 2023 for establishment of a joint company with JSW Steel in India for the production and sales of grain-oriented electrical steel sheet
- Expand solutions business (increase earnings 1.5x by fiscal 2022 vs. fiscal 2020)

Engineering business

- Started construction of new monopile production plant (Kasaoka) for offshore wind power projects (to begin operations in April 2024)
- Expanded overseas businesses (orders received for several bridges in Africa, order received for large-scale wastewater treatment plant in Indonesia)

Trading business

- Create No. 1 global processing and distribution structure for high-performance electrical steel sheet
 - Capacity expansion at Zhejiang JFE Shoji Steel Products Co., Ltd. [China], JFE Shoji Steel America, Inc. [United States], and JFE Shoji Electrical Steel Co., Ltd.'s Nagoya Works [Japan]
- Growth in overseas construction materials business
 - Acquisition of CEMCO (third-largest structural steel frame maker in the United States) to enter the North American steel sheet construction materials field

4 Advancement of DX Strategy

► See page 64 for more details about DX initiatives.

| Investment | Results through FY2022 | Medium-term Business Plan (FY2024) |
|---------------|--|------------------------------------|
| GX investment | Investment adoption under 50% Initiatives in offshore wind power generation business <ul style="list-style-type: none"> Monopile foundations / New plant construction (¥40 billion) Expansion of production capacity for extra-heavy steel sheet (¥13 billion) Increased production capacity for grain-oriented electrical steel sheet (¥46 billion) | ¥340.0 billion |
| DX investment | Investment adoption over 50% Updated systems at steelworks (Kurashiki district) | ¥120.0 billion |

Progress on DX strategy

| | |
|----------------------|---|
| Steel business | Increase productivity and strengthen manufacturing base with CPS / promote automation with robotics / improve labor productivity with data science technology |
| Engineering business | Create new businesses (RODAS boiler power generation services) / advanced digital twin initiatives (sophisticated 3D designs and visualization of plants) / digital service initiatives (5G open lab) |
| Security measures | Decided to reinforce security management structure (1) Update global support systems, (2) start upgrading to zero-trust platforms, and (3) address issues at equity-method affiliates and in supply chains |

5 Execution of Effective Investments, Financial Health

| Consolidated | FY2022 Results | FY2024 Plan | Operating Companies | FY2022 Results | FY2024 Plan |
|---|----------------|----------------|----------------------|-----------------|----------------|
| Business profit | ¥235.8 billion | ¥320.0 billion | Steel business | | |
| Profit attributable to owners of the parent | ¥162.6 billion | ¥220.0 billion | Profit per ton*2 | 7,000 yen/ton*3 | 10,000 yen/ton |
| ROE | 7.9% | 10% | Segment profit | ¥146.8 billion | ¥230.0 billion |
| Debt/EBITDA | 3.7x | About 3x | Engineering business | | |
| D/E ratio*1 | 67.8% | About 70% | Segment profit | ¥13.4 billion | ¥35.0 billion |
| Payout ratio (DPS) | 28.5% (¥80) | About 30% | Revenue | ¥512.5 billion | ¥650.0 billion |
| | | | Trading business | | |
| | | | Segment profit | ¥65.1 billion | ¥40.0 billion |

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

*2 Steel business profit per ton (consolidated segment profit / non-consolidated sales volume)

*3 Actually 3,000 yen/ton

Message from the CFO

Looking ahead to the investment in growth and the realization of carbon neutrality in the future, JFE will firmly achieve the Seventh Medium-term Business Plan and establish a strong financial and profit base.

Masashi Terahata

Executive Vice President and CFO
JFE Holdings, Inc.



Progress on Financial Strategies and Aims in the Seventh Medium-term Business Plan

The financial strategy and policy of the Seventh Medium-term Business Plan is to balance financial soundness with the efficient execution of investments based on selection and concentration. With a budget of 1,450 billion yen for capital investments and business investments, JFE will reduce the ratio of investments for maintenance in the steel business and reallocate funds for strategic investments, such as green transformation (GX), digital transformation (DX), and cutting-edge facilities, and overseas business investments. The Company plans to

keep these investments within the scope of net income (after taxes and dividends) and depreciation and amortization. To ensure financial soundness, JFE intends to maintain a D/E ratio of about 70% while flexibly and stably procuring capital for investments in growth and the realization of carbon neutrality in the future. To this end, JFE plans to reduce assets by 200 billion yen over four years by selling cross-shareholdings and reviewing assets and businesses that contribute little to earnings.

Assets were reduced by 87.3 billion yen as a result of selling cross-shareholdings, transferring shares in Group companies following a review of operations, and selling some land in the Keihin district. Of the subordinated loans raised in March 2018, 200 billion yen was repaid in advance of maturity, and a new

subordinated loan of 205 billion yen was raised in March 2023. The rating agencies' assessment of the capital component changed from 25% to 50% for this new subordinated loan.

With these factors in play, the D/E ratio was 67.8%, achieving our target ahead of schedule.

Path to Achieving Medium-term Financial Targets

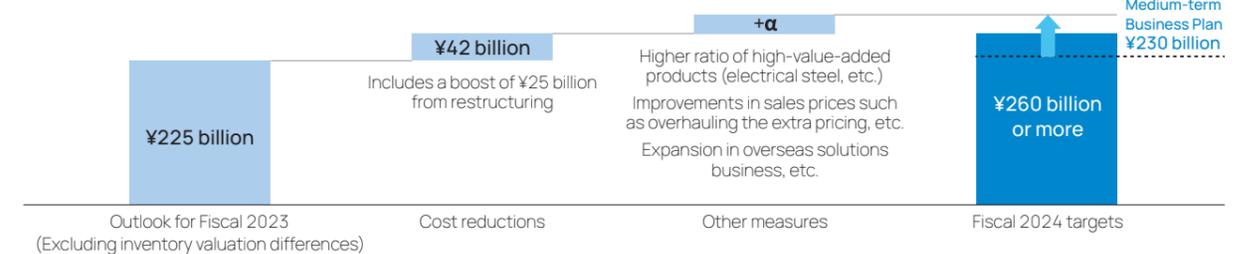
As one of the indicators we use as a financial target, we aim for a debt/EBITDA ratio of around 3x. In fiscal 2022, this ratio was 3.7x, missing our target. JFE must reduce its interest-bearing debt further and secure more EBITDA in order to achieve the target.

For fiscal 2023, JFE targets segment profit of 200 billion yen in the steel business (225 billion yen excluding inventory valuation differences). In line with the recovery of steel demand, we will further improve sales prices. In addition, we will complete structural reforms by suspending upstream processes at the Keihin district in September 2023, thereby enhancing product mix as well as reducing fixed costs. JFE expects to achieve

around 90% of its medium-term target (320 billion yen) with Group business profit totaling 290 billion yen, including 25 billion yen in the engineering business and 48 billion yen in the trading business. In the steel business, we aim for profit of 260 billion yen or more by fiscal 2024, the final year of our medium-term business plan, which is higher than our 230 billion yen medium-term target, as shown below.

With regard to interest-bearing debt, we will continue to improve the cash conversion cycle (CCC) through inventory reduction, in addition to asset reduction through the sale of cross-shareholdings and review of businesses and assets that contribute little to earnings.

Earnings Targets for Fiscal 2024 in the Steel Business



Shareholder Return Policy

We believe returning value to shareholders is one of the most important issues for management. Our proactive stance on shareholder returns entails a basic policy of targeting a dividend payout ratio of about 30% while ensuring a sustainable corporate structure for the entire Group.

In light of earnings prospects, JFE plans to distribute an annual dividend of 100 yen per share (dividend payout ratio of 30.6%) for fiscal 2023.

On the other hand, PBR has been below 1x since March 2015. We attribute this to the market perception that JFE cannot reliably realize ROE above the cost of equity due to earnings volatility in the steel business and strong uncertainties in the outlook for the steel business amid a declining birthrate, aging population, and decarbonization.

The Board of Directors continues to discuss measures for

lifting the PBR, and for the time being, JFE will pursue the measures outlined in the medium-term business plan with the intention of beating its own earnings targets. As a target in our medium-term plan, we understand it will be necessary to reliably realize ROE of 10% (it was 7.9% in fiscal 2022), which is commensurate with our estimated cost of equity. At the same time, we will work on the development of innovative technologies for realizing carbon neutrality. Including reductions during the transition period through 2030, JFE will spend on R&D and invest in equipment to make steady progress toward realizing carbon neutrality in a bid to wipe away market concerns about the future viability of the steel business. By proactively disclosing these initiatives through investor relations and other activities, we aim to increase corporate value and improve the market's perception of us.

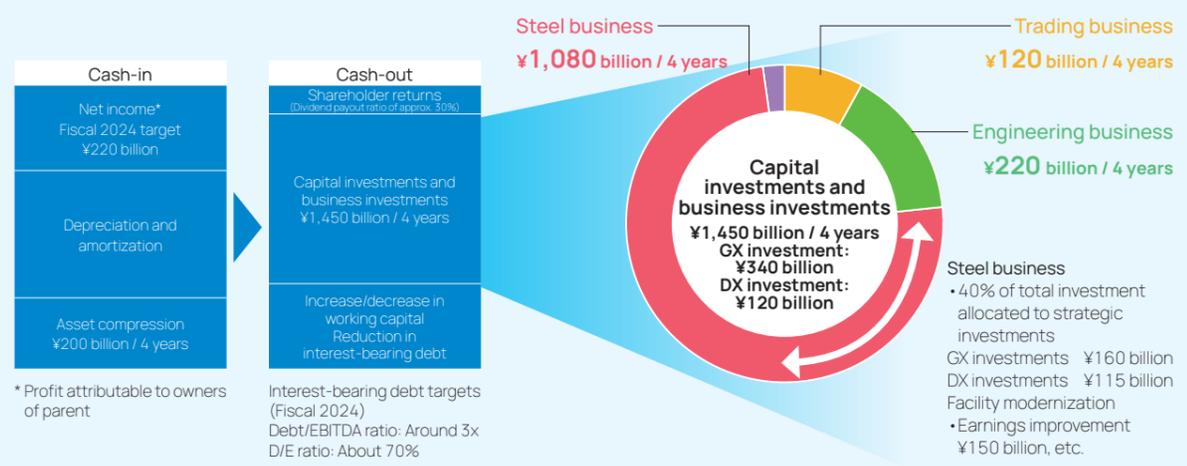
Regarding Issuance of New Shares and Convertible Bonds

In order to flexibly advance the GX strategy and achieve sustainable profit growth, JFE Holdings has determined that it is necessary to build an even stronger financial base and improve financial flexibility. In September 2023, now that a path forward has become visible in the medium-term business plan, the Board of Directors has approved a resolution to (1) issue new shares in an international offering, (2) dispose of treasury shares, and (3) issue convertible bonds due 2028. The proceeds from the

issuance of new shares will be used for investments in electrical steel, an area of strong growth potential, while proceeds from the issuance of convertible bonds will be allocated to investments in carbon neutrality.

For more details, please refer to the Company's news release on September 5, 2023. <https://www.jfe-holdings.co.jp/en/release/2023/09/230905.pdf>

Capital Allocation and Investment Plans under the Seventh Medium-term Business Plan



Progress as of Fiscal 2022

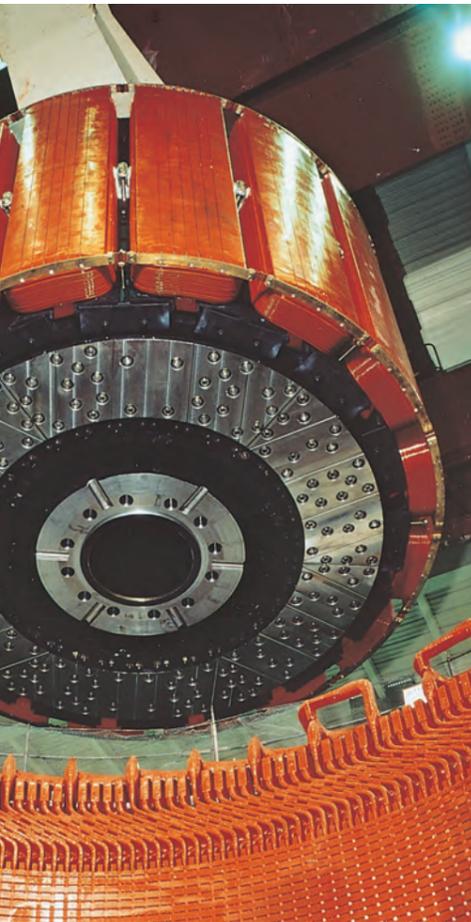
JFE has made capital investments and business investments in line with its plan, having decided how to spend more than 50% of the investment budget for the entire Group as of the end of fiscal 2022. Investments to achieve our CO₂ reduction targets are also being steadily approved and executed, with a cumulative total of 110 billion yen already approved. In line with its basic policy, the Company has been making investments within the scope of net income (after taxes and dividends) and depreciation and amortization. Due to an increase in working capital alongside higher prices for primary raw materials and other commodities, interest-bearing debt increased by 56.8 billion yen, to 1,862.9 billion yen.

Total Consolidated Cash Flow in Fiscal 2021 and Fiscal 2022 (billion yen)

| Fiscal 2021 | | Fiscal 2022 | |
|---|-----------------------|-------------|----------|
| Cash-in | Cash-out | Cash-in | Cash-out |
| Profit attributable to owners of parent | Dividend payment | ¥450.6 | ¥115.5 |
| Depreciation and amortization | CAPEX & investments | ¥521.8 | ¥635.4 |
| Asset compression | Working capital, etc. | ¥87.3 | ¥365.6 |
| Debt | | ¥56.8 | |

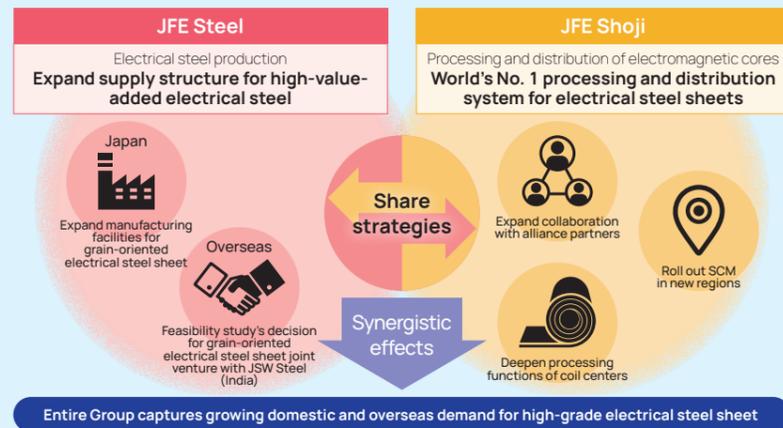
Interest-bearing debt outstanding: ¥1,849.4 billion at the end of FY2021 → ¥1,862.9 billion at the end of FY2022

Special Feature: Electrical Steel Strategy



Strengthen Production of Electrical Steel

In its Seventh Medium-term Business Plan, JFE Holdings has designated electrical steel as one of its high-value-added products to see expansion in production. As environmental regulations are tightened around the world, the electrification of automobiles has gained momentum. Accordingly, supply-demand conditions look likely to tighten as a result of strong growth in demand for high-grade non-oriented electrical steel sheet used in the primary drive motors of BEVs and other electric vehicles. In addition, global consumption of electricity is likely to increase, particularly in India, a growth market where demand is on the rise for grain-oriented electrical steel sheet used to make transformers. With synergies between its steel business and trading company operations, JFE Holdings aims to latch onto this demand and spur further growth.



What is electrical steel?

Electrical steel is a material that incorporates silicon (Si) and aluminum (Al), etc., into iron. It possesses exceptional magnetic properties in terms of high magnetic flux density and low iron loss, and exhibits nearly uniform magnetic characteristics in all directions. There are two types of electrical steel: non-oriented electrical steel sheet, which is suitable for use as core material in motors; and grain-oriented electrical steel sheet, which displays highly superior magnetic properties in a single direction (the rolled direction), making it a suitable core material in transformers, for example.

From household appliances and IT equipment to trains,

elevators, automatic doors, and conveyor belts, a diverse array of equipment that utilizes electricity play a crucial role in our affluent and convenient lifestyles. Among these, electrical steel sheets are essential component materials for motors and transformers. Notably, one of the distinctive features of electric steel sheets is their remarkably low iron loss (the energy loss that occurs when iron undergoes magnetization, which is a contributing factor to reduced efficiency in transformers and motors). This significantly contributes to enhancing the efficiency, miniaturization, and lightweight design of various equipment.

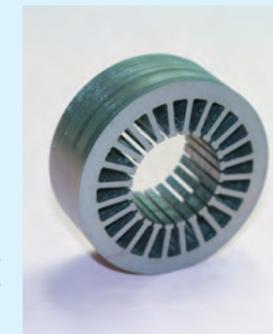
Non-oriented electrical steel sheet

Main applications

- BEVs and other electric vehicles
- Electrical equipment such as motors
- Electric power generators

Main customers

- Manufacturers of automobiles, automobile parts, home appliances, and industrial machinery in Japan and overseas



Grain-oriented electrical steel sheet

Main applications

- Electric power and distribution, transformers

Main customers

- Heavy electric machinery makers, etc., in Japan and overseas



Steel Business

<Japan>

West Japan Works (Kurashiki district) Additional expansion of electrical steel production facilities

Modernization of electrical steel production capacity Planned for fiscal 2026

Expand **3** times

As global initiatives toward carbon neutrality advance, the move toward vehicle electrification is accelerating. With the tightening of environmental regulations worldwide, demand for BEVs and other electric vehicles is expected to surge. Compared to 2019, demand is anticipated to increase more than sixfold by 2026 and more than fourteenfold by 2035. Alongside this growth, JFE Steel forecasts a rise in demand for non-oriented electrical steel sheets, which are essential for drive motors.

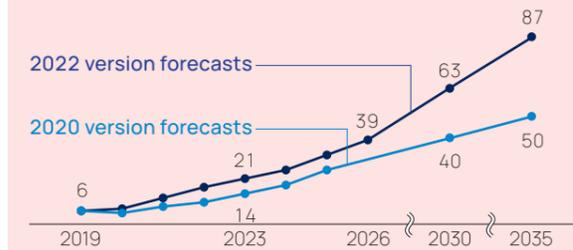
To reliably capture this burgeoning demand, JFE Steel will increase its production capacity for top-grade non-oriented electrical steel sheets to three times the current level. We are presently advancing our capacity expansion efforts and plan to double current production capacity in the first half of fiscal 2024, and to triple it by the middle of fiscal 2026.

The top-grade non-oriented electrical steel sheets that we are increasing production volumes for feature lower iron loss, higher strength, and higher magnetic flux density than other types of non-oriented electrical steel sheets used for EVs. Utilizing our sheets as core materials contributes to more power-efficient motors with higher revolutions and output, allowing for a smaller and lighter motor, and either longer driving ranges or smaller battery sizes. These benefits would not be possible without the application of our proprietary technologies, and meet the performance requirements of automobile manufacturers.

Alongside the electrification of vehicles, increased efficiency in energy utilization, and the expanded adoption of renewable energy, we foresee sustained growth in global demand for high-grade electrical steel sheets. Moving forward, JFE Steel will evaluate additional capital investments to meet this growing demand.

Increase production and sales of top-grade non-oriented electrical steel sheets by leveraging the Group's extensive supply chain, as well as its product development capabilities and production technologies

Outlook for global demand for EVs (millions vehicles)



Aims of primary drive motors in EVs



Expansion of production capacity

| | Total investment amount | Commencement of operations (planned) | Production capacity (planned) |
|----------|-------------------------|--------------------------------------|--|
| Phase I | About ¥49.0 billion | First half of fiscal 2024 | Double current production capacity for top-grade non-oriented electrical steel sheets for primary drive motors of EVs |
| Phase II | About ¥46.0 billion | During fiscal 2026 | Tripling of current capacity includes Phase I expansions |

JFE Steel satisfies performance requirements for electrical steel



Steel Business

<Overseas>

Expand business in India, where economic growth is strengthening

Demand for grain-oriented electrical steel sheet

Projected size of market in 2030

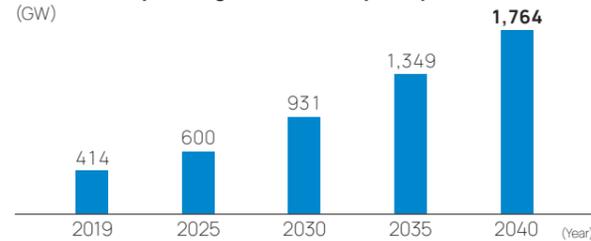
480,000
tons

In addition to growing global demand for electricity, the increasing adoption of renewable energy is likely to lead to a significant increase in demand for power transformers and distribution transformers. In particular, India's economy is growing at an annual clip of 7%, and demand for grain-oriented electrical steel sheets is likely to increase at a similar pace. We anticipate that by 2030, the scale of this market will reach 480,000 tons in India.

Furthermore, due to high-efficiency regulations imposed by the Indian government on power generation plants, high-grade grain-oriented electrical steel sheets have primarily been used in transformers for government projects since 2018. This suggests potential for further growth in demand for high-grade steel products.

Since we entered into the strategic comprehensive alliance agreement with JSW Steel in 2009, we have deepened the level of our collaboration through capital participation, as well as the provision of environmentally friendly technology solutions for automotive steel materials and non-oriented electrical steel sheets. Looking ahead, JFE Steel will continue to fully leverage its technologies and steadily tap into this demand.

Outlook for power generation capacity in India (GW)



Source: IEA India Energy Outlook 2021

Trading Company Business

<Japan and Overseas>

Aim to be the world's No. 1 processor and distributor

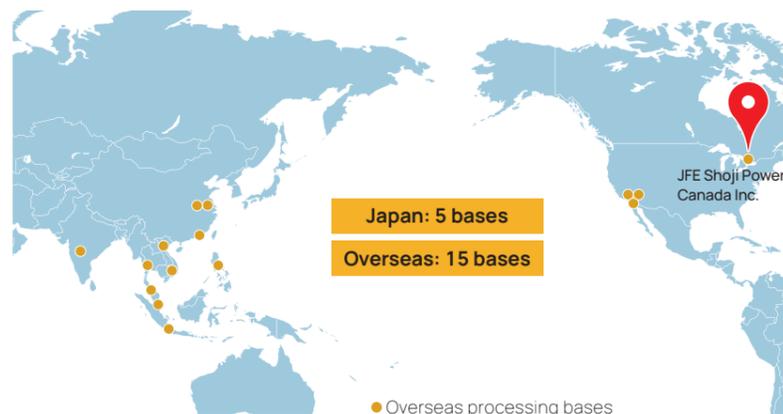
Electrical steel processing centers
End of fiscal 2022

11 countries
15 bases

The JFE Shoji Group currently has a five electrical steel processing bases in Japan, as well as in 15 overseas locations across 11 countries, including China, the ASEAN region, India, Mexico, and Canada.

In light of the accelerating global movement toward decarbonization, demand is increasing for electrical steel amid the rapid shift to EVs, increasing efficiency of transformers, and the expanded adoption of renewable energy. In response, the JFE Shoji Group is expanding capacity at all of its domestic and overseas bases.

In Japan, we are proceeding to expand plants and upgrade press processing equipment at the Nagoya plant of JFE Shoji Electrical Steel Co., Ltd.



Basic Agreement with India's JSW Steel for Establishment of Production and Sales Company for Grain-Oriented Electrical Steel Sheets

JFE Steel and JSW Steel have been conducting detailed studies aimed at commercializing the production and sales of grain-oriented electrical steel sheets in India. In August 2023, this culminated in a contract for the establishment of a joint venture company with JSW Steel. Plans call for the joint venture to be located in the Bellary district of Karnataka, India, where JSW Steel's Vijayanagar Works is situated. Hot-rolled steel sheet, the raw material for grain-oriented electrical steel sheets, will be produced at JSW Steel's Vijayanagar Works, thereby establishing India's first integrated production system for grain-oriented electrical steel sheet. By locally producing the high-grade grain-oriented electrical steel sheets that feature excellent energy efficiency thanks to the technologies that JFE Steel has developed over the years, JFE Steel will contribute to the development of greener power transmission and distribution infrastructure and support the significant growth of the Indian economy. Once approvals from relevant authorities have been obtained with the intention of commencing full-scale production by fiscal 2027, we will proceed with the establishment of the joint venture and the construction of the production facility.



JSW Steel Ltd. Vijayanagar Works

Overseas, through our collaboration with the major French motor core manufacturer Bourgeois S.A., we are keen to supply motor cores mainly to European automakers in China, Mexico, and the United States. JFE Shoji Steel de Mexico, S.A. de C.V. continues to strengthen processing and logistics capabilities for non-oriented electrical steel sheets used in motor cores, as well as grain-oriented electrical steel sheets used in transformer cores.

Additionally, JFE Shoji Power Canada Inc., which joined the Group in 2019 (formerly Cogent Power), aims to complete within the year the expansion of its processing facilities for grain-oriented electrical steel sheets for transformers, a market expected to grow in North America, while also developing markets in the EV field.

Furthermore, JFE Shoji Steel India Private Limited is synchronizing strategies with JFE Steel, which is establishing a joint venture with JSW Steel, to improve supply chain management, including the strengthening of existing businesses. In China, we have commenced plant expansion and equipment upgrades for automotive motor cores at Zhejiang JFE Shoji Steel Products Co., Ltd. in order to capture EV demand.

We will steadily move forward on the building of a processing and distribution structure in Japan and abroad with the aim of creating the world's No. 1 processing and distribution system, to lock into anticipated growth in demand for electrical steel sheet.

Mutually Fruitful Collaboration with JSW Steel

JFE Steel has built up solid ties with JSW Steel in India to cater to rising demand, driven by rapid development in the country, with "Make-in-India" steel products. Since our capital participation in 2010, we have contributed to JSW Steel's dramatic growth by providing our well-established technology for high-grade steel, including automotive steel sheets and non-oriented electrical steel sheets. With our recent agreement to establish a joint venture company for production and sales of grain-oriented electrical steel sheet, we will further contribute to India's green growth and development.



Chairman Sajjan Jindal of JSW Steel and President Yoshihisa Kitano of JFE Steel

History of collaboration with JSW Steel

| Date | Event |
|---------------|--|
| November 2009 | Conclusion of Comprehensive Strategic Collaboration Agreement |
| July 2010 | Capital participation and Technical Collaboration Agreement |
| August 2010 | Licensing of automotive steel sheet production technology and steelmaking operation improvement technology |
| February 2012 | Application of the Equity Method |
| December 2012 | Licensing of non-oriented electrical steel sheet production technology |
| August 2023 | Agreement to jointly establish grain-oriented electrical steel sheet production and sales company |

Voice from the Front Lines — Trading Company Business VOICE

Demand for electrical steel sheet has steadily increased in North America due to needs for higher energy efficiency, greater adoption of renewable energy, and the electrification of automobiles.

Through collaboration with JFE Shoji Steel America, Inc. (JSA), which is part of the JFE Shoji Group, we are able to secure a larger market share in the electrical steel sheet markets for transformers and automobiles in North America.

We plan to complete the installation of new transformer processing equipment by the end of 2023, and will continue to develop the EV market in line with demand for electrical steel sheets in North America.

We are extremely pleased to be able to contribute to the JFE Shoji Group, one of the world's leading processors of electrical steel sheet for transformers and motor cores.



Ron Harper

President and CEO
JFE Shoji Power Canada Inc.

Special Feature: Land Utilization in the Keihin District

Large-Scale Land Conversion to Pave the Way for the Next 100 Years

Following the suspension of upstream operations in the Keihin district of the East Japan Works, areas exceeding 400 hectares, centered around the 222-hectare Ohgishima site, will be subject to land use transition.

The JFE Group will take on the challenge of transitioning this land to a different use, with an eye on the future and the sustainable development of the local community and society.

Aiming to Utilize Land for Sustainable Regional Development in Collaboration with Kawasaki City

JFE Holdings, in the pursuit of an optimal domestic production structure through reforms, has entered into an agreement with Kawasaki City to repurpose the use of land in the Keihin district. The two parties are working together to explore ideas for using this land.

Characteristics of the Keihin district:

- Vast land located in the Greater Tokyo area, a major economic region
- Geographical advantages: Close to major roads, such as the Metropolitan Expressway Bayshore Route, and Haneda Airport
- Concentration of power plants and other energy facilities in the vicinity
- Location in Keihin Port and the existence of one of the Japan's deepest berths



Start of Business as Pioneer of Transitioning Large-scale Land Use in Minami-watarida Area

In March 2023, we selected a business partner for the north side of the north district of the Minami-watarida area. We began work on urban development with a focus on R&D functions, taking the first step in transitioning the large-scale use of land encompassing about 400 hectares. In the same month, JFE decided to sell land to companies that can capitalize on its

proximity to major transportation arteries and Kawasaki Port in the Ohgimachi area.

We intend to prepare the Mizue district to become a major recycling hub in the Greater Tokyo area, with J&T Recycling Corporation, a subsidiary of JFE Engineering, in charge of working with the government to launch operations in fiscal 2024.

Role of the JFE Group and Business Use

The JFE Group is working with Kawasaki City, other government agencies, and local companies, including energy companies, to develop the area in a way that will help fuel the sustainable development of the Keihin Waterfront Area, and we will accordingly

undertake comprehensive land management, encompassing site sales, leasing, and business use. In terms of business use, we will be looking at new carbon-neutral businesses and recycling businesses on a Groupwide basis.

| | | | |
|---------------------|----------------------------|-------|--|
| Ohgishima Lead area | Carbon-neutrality business | ■ ■ ■ | Participation in supply chains for hydrogen, ammonia, etc. |
| Ohgishima North | Carbon-neutrality business | ■ ■ ■ | |
| | CO ₂ business | ■ ■ ■ | Collection, transport, storage, liquefaction, shipping, CCS/CCU for CO ₂ emitted by local energy companies etc. |
| | Electric power business | ■ ■ | Introduction of H ₂ into power plants for clean electricity generation, storage, and sale |
| Mizue area | Recycling business | ■ | Collaborating with Kawasaki City to develop the site as a major recycling center for Greater Tokyo |

■ JFE Steel ■ JFE Engineering ■ JFE Shoji

PICK UP

Announcement of OHGISHIMA 2050 Land Use Concept

Along with the suspension of blast furnaces in September 2023, JFE Holdings announced OHGISHIMA 2050 as a concept for using land centered in the Ohgishima South, in line with Kawasaki City's land use policy.

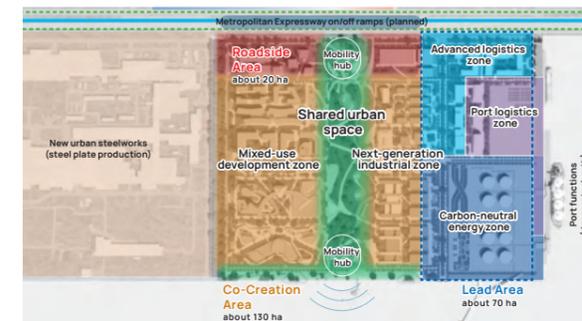


CONCEPT:

We aim to create fields of innovation and enterprise that will address the complex challenges involved in the pursuit of carbon neutrality, developing the site into an urban area that will contribute to the sustainable development of communities and society as a whole and help address some of the key challenges Japan faces. It is also hoped that the area will be able to provide support for the Greater Tokyo area's disaster prevention and management initiatives.

Rendered using Geospatial Information Authority of Japan map data.

Land Use Zoning and Realization Process for Ohgishima District



● Roadside Area ● Co-Creation Area

In addition to the Pilot Area, the Roadside Area will feature facilities that align with the land use concept and take advantage of the proximity to the road. The Co-Creation Area will be for testing technologies of the future and implementing the latest services, and feature next-generation industries, commerce, and culture & lifestyles.

At the center of the Co-Creation Area will be the Shared urban space with rich greenery and the latest infrastructure that supports DX and GX, including next-generation mobility, carbon-neutral energy, and high-speed information platforms. On each side of the Shared urban space will be the Mixed-use development zone and the Next-generation industrial zone for Japanese and foreign companies to come up with applications related to next-generation industries, commerce, and culture & lifestyles. The aim is to promote urban development through public-private co-creation that is in tune with the dynamic and diverse changes in modern times. Based on this outline of the overall district, JFE will advance preparations in stages without interruption, setting its sights on targets for 2050.

Lead Area

In the Lead Area, using the deepwater berth, plans call for the creation of hydrogen supply bases and port logistics facilities, which will guide the entire district toward carbon neutrality and facilitate the transition of land use. A portion of the land in the Lead Area is slated to become available in fiscal 2028.

Message from the Director in Charge

Promoting OHGISHIMA 2050, JFE Holdings aims to transition this land use, which has high public utility and help solve important national issues. Through efforts to establish new industries and create jobs for the next century, we aim to play our part in the sustainable development of the region and society. While collaborating with Kawasaki City and other government entities, as well as neighboring energy companies and other local firms, JFE will leverage the comprehensive potential of the Keihin Waterfront area and engage in responsible area management guided by the concept for 2050. We are ready to make strong progress transitioning the use of this land.

Makoto Iwayama

Senior Executive Officer in charge of Keihin Area Land Development Dept. JFE Holdings, Inc.

