

Tackling the Biggest Challenge Since Our Founding to Ensure Earth's Prosperity

Maximizing Group synergies for sustainable growth and enhanced corporate value over the long term.

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Looking Back at Fiscal 2021

We achieved measurable progress in shifting from quantity to quality in our Seventh Medium-term Business Plan.

In fiscal 2021 we launched our Seventh Medium-term Business Plan and succeeded in achieving a V-shaped recovery thanks to comprehensive efforts to strengthen the Group, supported by a recovery in demand due the resumption of full-scale global economic activity. Revenue reached the 4-trillion-yen level for the first time since our establishment, and both business profit and profit were the highest since the financial crisis of 2008.

In the first year after completing our Sixth Medium-term Business Plan in fiscal 2020, we made steady

progress in our mainstay steel business by strengthening our manufacturing base and utilizing data science to improve our manufacturing capabilities. We also increased efforts to raise sales prices. Coking coal and iron ore, the main raw materials used to make steel, saw prices fluctuate wildly, prompting us to reflect significant changes in our main raw materials costs in our selling prices by launching earnest discussions with customers early on. In addition, we increased our ratio of high-value-added products that allow us to best leverage our unique technological strengths, and we made progress in better aligning our pricing structure with the actual value customers gain from using high-quality

products from JFE. Overall, we believe that we achieved measurable progress in shifting from quantity to quality, one of the key objectives of our current plan.

Steady Progress in All Three Segments

Segment profit in our steel business came to 323.7 billion yen in fiscal 2021, which was well ahead of our fiscal 2024 target of 230.0 billion yen. But profit per ton of steel was 6,000 yen/ton, which did not reach our target of 10,000 yen/ton after excluding inventory valuation differences and other one-time effects. As I will discuss below, there are still many areas where we must—and can—do better under our current plan.

In our engineering business, where we have steadily increased sales and profits over the past few years, segment profit in fiscal 2021 amounted to 26.0 billion yen, an improvement from the previous fiscal year. In environmental sectors where we are particularly strong, such as waste treatment facilities and recycling, we established a stable earnings base by increasing our ratio of engineering, procurement, and construction (EPC) projects and also outsourcing business in which we undertake contracted facility operation after construction.

Our trading business achieved record-high segment profit of 55.9 billion yen, thanks to a recovery in demand for steel products in Japan and overseas, and particularly strong earnings in North American business. Amid the favorable business environment, we invested in growth to acquire Cogent Power (now JFE Shoji Power Canada) in Canada as our new processing center for electromagnetic steel sheets, and also to expand processing capacity to strengthen our automotive supply

chain and to establish a new construction materials business through additional investments in Vietnamese partner companies.

Need to Improve JFE's Market Valuation

Despite achieving our highest profit since the 2008 financial crisis and a strong return on equity (ROE) of 15.7%, such efforts were not fully recognized by shareholders and investors in terms of our share price. The stock market apparently views it as a challenge for the Company to achieve a stable ROE that exceeds the cost of shareholders' equity.

As we move through the most significant medium-term period since our founding, we have committed the Company to establishing a stronger foundation—one that combines economic sustainability with environmental and social sustainability. We strongly believe this is the best course for the Company, both financially and ethically, so the market's lukewarm assessment has been frankly disappointing.

Given that our mainstay steel business is a CO₂-emitting industry, undoubtedly more than a few people are concerned about the prospects for the Company and the steel industry in an increasingly decarbonizing world. In addition, domestic demand for steel is expected to plateau due to Japan's declining birthrate and aging population, even though global demand for steel is forecast to increase steadily, especially in Asia.

Going forward, we aim to redouble our efforts to dispel any such concerns of our shareholders and investors and gain a better understanding as well as more realistic expectation regarding the Group's promising future prospects and growth path.

Toward a More Robust Business Foundation

Upgrading Our Product Mix and Raising Profitability in Steel

We envision significant changes in our steel business environment, including a shrinking market in Japan due to a declining population, intensifying competition in overseas markets trending toward local production for local consumption, and the advancement of electric vehicles (EVs). Regardless of when or how these changes occur, under our current plan we are determined to establish a stronger earnings base for targeted earnings on a sustainable basis.

To this end, we are now in the middle of structurally

reforming our steel business, which is a major prerequisite for our targeted shift from quantity to quality. Once we complete the suspension of upstream processes at the Keihin district of our East Japan Works, which is targeted for September 2023, we expect to reduce annual costs, mainly fixed costs, by 50 billion yen, and then strategically focus resources on our manufacture and sale of high-value-added products under a new production system.

General-purpose products, currently accounting for about 30% of our steel exports from Japan, will not be a sustainable product category over the medium to long



term as competition with local manufacturers intensifies, especially in Southeast Asia. In order to make full and effective use of leaner production capacity following structural reforms, we will accelerate our shift to the development, production, and sales of products for which we can best utilize JFE's technological strengths. We are already engaging in forward-looking discussions with customers about raising our ratio of high-value-added products as well as more closely matching pricing with the actual value of using our high-quality, high-performance steel products. By the end of the current medium term, once our structural reforms are completed, we intend to raise our ratio of high-value-added products to 50% (as compared to 40% before the current medium term) and create an overall structure capable of stably generating profit of 10,000 yen per ton.

Many customers in a variety of sectors are accelerating efforts to keep pace with change. For example, in the automotive industry, where the shift to EVs continues to move forward, strenuous efforts are being made to reduce car body weights in order to compensate for the addition of much heavier batteries. Also, demand will continue to grow for JFE-HITEN ultra-high-tensile-strength steel sheet, which is both lightweight and ensures passenger safety, and for high-grade electromagnetic steel sheets that contribute to smaller and lighter motors. Newly emerging opportunities also exist in fields such as extra-thick steel plates for offshore wind power monopiles, crack-resistant steel plates for larger container ships, and high-alloy seamless steel pipes for carbon dioxide capture and storage (CCS). Of course, competitors in China and elsewhere are working day and night on their own technological development,

but we are determined to stay one step ahead of our competition at all times. In these and other promising fields, we will continue to work closely with customers to further raise our quality and production capacity.

Developing Technology for Carbon Neutrality

JFE has declared its commitment to serving as an essential participant in the development of a sustainable world that offers humankind safety and comfort. As the world becomes increasingly concerned about climate change, one of the key efforts will be to manufacture steel with as little environmental impact as possible so that diverse industries many continue to benefit from this indispensable basic material.

Initially, we are focusing on two basic tasks. The first is to quickly develop ultra-innovative decarbonized steelmaking technologies, which will stimulate increased global demand for steel products, especially in Asia. As European manufacturers continue to work on developing hydrogen steelmaking technology, we are sometimes asked why JFE doesn't stop using blast furnaces and start using electric arc furnaces. In reality, however, the race to develop decarbonized steelmaking technology has just started, and as of yet there is no dominant technology nor manufacturer. In the case of hydrogen steelmaking, only high-grade ores with low production volume can be used at present, temperatures inside furnaces must be lowered somehow, and the cost of hydrogen is high. In the case of electric arc furnace steelmaking, productivity is low, it is difficult to produce high-grade steel, and global demand cannot be met by scrap alone. To be sure, JFE is also pursuing technologies for electric arc furnaces and hydrogen steelmaking. But we also have high expectations for developing carbon-recycling blast furnaces. If we can establish a decarbonized steelmaking technology based on the blast furnace method, which has the advantage of efficient large-scale production, we expect to contribute significantly to decarbonization in Asia, where demand for steel products continues to grow. In Japan, where the development of the carbon-recycling blast furnace technology is being promoted through the Green Innovation Fund established by the New Energy and Industrial Technology Development Organization (NEDO), we plan to conduct small-scale blast furnace tests by 2026 and larger-scale tests thereafter, and then gradually implement the most proven technologies in the 2030s.

The second basic task is to steadily promote decarbonization by expanding our application of existing technologies, basically until the aforementioned ultra-innovative

technologies are developed. In February 2022, we upwardly revised our CO₂ reduction target for fiscal 2030 from our initial target of 20% or more (compared to our fiscal 2013 level) to a new target of 30% or more. We are also further reducing our hot metal content ratio and investing in new energy-saving measures wherever possible. In addition, when we carry out the scheduled suspension of a blast furnace in our Kurashiki facility, we are exploring the option of introducing a high-efficiency, large-scale electric arc furnace for high-grade steel production between 2027 and 2030.

I would like to emphasize to stakeholders that the global trend toward decarbonization represents an opportunity, not a threat, for the Company. The more that people demand decarbonization, the more opportunities we will

have to leverage our world-class JFE technological capabilities. This is something we have repeatedly emphasized to our development teams and are now pursuing Groupwide in order to become a carbon-neutral company and thereby strengthen our presence in the market.

But carbon neutrality cannot be achieved without massive investments in R&D and actual implementation. Internally, in addition to improving the profitability in our core business, we are making use of Green Innovation Fund financing and transition bonds. It must be noted, however, that in places such as China and Europe, national governments are providing huge funding for R&D as nations themselves begin to compete for supremacy in decarbonized steelmaking.

Growth Strategies

Overseas Business Expansion

With growth in the Japanese domestic market forecasted to slow down due to the declining birthrate and aging population, each of our three core businesses is seizing growth opportunities in overseas markets, especially Asia.

In the steel business, current growth strategies include a joint venture with JSW Steel in India for production of directional magnetic steel sheets and expansion of solutions businesses. In the growing Indian market, we are expanding our business step by step through our relationship with JSW Steel. At present, the focus is electromagnetic steel sheets used in transformers, etc., but considering that demand for EVs will increase, collaboration in the field of non-directional electromagnetic steel sheets is also possible.

In North America, we are strengthening our relationship with Nucor, the largest steel manufacturer in the United States. In 2020, Nucor-JFE Steel Mexico (NJSM) began operating as an automotive steel sheet joint venture in Mexico and in 2021 JFE Steel and Nucor became partners in the U.S. steelmaker CSI. We aim to continue pursuing opportunities for collaboration and growth by combining Nucor's high production and sales capabilities with JFE Steel's high-grade steel sheet manufacturing technology.

Other efforts are underway to leverage our technological strengths in order to enter global markets and we plan to announce such developments as quickly as possible.

In the trading business, we are aggressively pursuing investments including M&A to establish the world's No. 1 processing and distribution system for electromagnetic steel sheets, to strengthen our supply chain management system for automotive steel products, and to accelerate our overseas construction materials business. In August 2022, we decided to acquire CEMCO, a U.S. manufacturer and distributor of steel sheet building materials.

In our engineering business, where we are scaling up strengths through M&A under our JFE Project One strategy, we are expanding our involvement with waste power generation in Europe, where demand is expected to remain strong, and in Asia we are growing our outsourcing businesses in areas such as industrial waste treatment. Our engineering business is targeting one trillion yen in net sales in fiscal 2030, compared to 508.2 billion yen in fiscal 2021. To achieve this goal, we will collaborate with outside partners to acquire new technologies and resources as well as increase the competitiveness of our products. The goal is to expand with a sense of urgency through M&A, business launches with partners, and the formation of new alliances.

Enhancing Group Synergies

Twenty years have passed since JFE was created through business integration. So far, we have implemented diverse strategies, including the establishment of an East-West geographical division of our steel mill structure in Japan, horizontal group deployment of

superior technologies and know-how, and strategic repositioning of our business portfolio, including in our trading company business. In terms of synergies among our operating companies, however, we have determined that further opportunities exist. Accordingly, we are now working to enhance our internal synergies by combining the strengths of our entire group for increased corporate value.

In the implantable (fixed) offshore wind power generation business, a key pillar of our medium-term growth plan, our steel business in Kurashiki manufactures extra-thick steel plates, our engineering business assembles them into monopiles, and our trading business handles logistics and commercial distribution. Using this system as an excellent model for our future growth, we now plan to seize opportunities for operation and maintenance businesses in the promising field of offshore wind power by adapting our steel business' facility maintenance and control technologies and our engineering business' operation and maintenance experience with onshore wind power generation.

As another example, our steel business is developing technology so that blast furnaces can use the methane gas created when hydrogen is synthesized with CO₂ separated from furnace flue gas (methanation). Our engineering business, meanwhile, is developing technology to separate and recover CO₂ from incinerators and power generation facilities and recycle it through methanation, etc. Going forward, we hope to create new value by combining these two technologies in innovative new ways.

Under the leadership of our holding company, we are now actively pursuing new growth initiatives by combining the many respective strengths of the operating companies under our corporate umbrella.

Digital Transformation

With the business environment changing more rapidly and drastically than ever before, digital transformation (DX) is an invaluable means of adapting quickly and flexibly in order realize improved corporate value over the medium to long term.

Our steel business is raising productivity and strengthening production infrastructure through the use of cyber-physical systems that link actual manufacturing processes with virtual processes in real time. Our engineering business is utilizing artificial intelligence (AI) and the Internet of Things (IoT), including the development of digital twins that allow personnel to visualize processes and costs as well as optimize operations by

reproducing the real world virtually. Also, digital services are being developed to optimize facility and infrastructure operations and preventive maintenance.

Our current plan has earmarked 120 billion yen in DX initiatives, but success requires more than simply investing in new organizational structure; it also requires acceptance by employees on the front lines. Taking the steel business as an example, we have given some 450 employees opportunities to be trained as data scientists and we plan to increase this number to roughly 600 under our current plan. Furthermore, in our manufacturing and R&D divisions, we are training personnel to be able to grasp the findings of our data scientists and then turn their knowledge into action. We expect to significantly enhance our investment initiatives with innovative ideas from the front lines.

Going forward, we intend to shift from our traditional focus on internal optimization, such as productivity improvement, to the challenge of creating external added value and developing new businesses, such as solutions businesses that utilize data from our steel business and preventive maintenance services for power-generation plants based on our engineering know-how.

DX at JFE also includes vital initiatives for security management to protect information assets and to carry out business safely, for which we are strengthening not only security measures but also governance.

Work-style Reforms and Human Resources Development

The foundation of the Company is our people, which is why we actively engage in human capital management. To attract diverse and talented people, retain them as they grow with the Company and steadily maximize their abilities, we are reforming our work styles, promoting diversity and inclusion, including mid-career hiring, and enhancing our education and training systems.

Reforming our work styles is particularly important. Ideally, we want to provide employees with work styles suited to their individual characters and circumstances so that they work with a sense of fulfillment and job satisfaction, which in turn leads to improved productivity. Our initiatives include system reforms (telecommuting, coreless flex, etc.), office improvements (free address, etc.), and work reviews (paperless, discontinued use of personal seals, etc.). In addition, to improve employee engagement we conduct satisfaction surveys and reflect the feedback in Company policies as appropriate, and we are strengthening workplace communication through regular one-on-one meetings between

supervisors and subordinates. Furthermore, we revised our target for women managers to at least 10% overall for section managers or above and at least 20% in management and sales divisions by 2030.

Human resource management at JFE is based on the premise that the safety and health of employees must always be protected. Prioritizing safety over everything else, the JFE Group invests some 10 billion yen annually in safety measures and actively promotes health management.

As president, I am committed not only to enhancing these systems and frameworks but also to clearly communicating the aims and expectations behind each initiative to our employees.



To Our Stakeholders

In 2021, world crude steel production totaled about 1.9 billion tons for the first time in history. Based on projected increases in global population and economic growth, some estimates suggest that this figure will rise to 2.7 billion tons by 2050. No other industrial material can be produced and consumed on the scale of steel, and there is no candidate material capable of fundamentally replacing steel over the current medium to long term. JFE is highly conscious of its responsibility to contribute to global development in a sustainable manner as a company providing products, technologies, and services based on steel, an indispensable material for global society.

At present, steel emits less CO₂ per unit volume than aluminum or carbon fiber and it is an excellent material in terms of recyclability and production cost. By maximizing our current and future technology, however, we are convinced that we can realize even greater potential for steel in the coming decades.

The global trend toward decarbonization represents an opportunity, not a threat, for the Company, based on which we intend to elevate our position in global society.

To enhance our reputation as a vital contributor to sustainable global development and safe, comfortable human life, our operating companies are respectively solidifying their revenue bases, pursuing growth opportunities, and maximizing their synergies through organic linkage within the Group. As president, I will do my utmost to explain how the Company is evolving strategically and responsibly through these initiatives to help stakeholders fully understand and indeed embrace our high expectations for the future of JFE.

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