

Material CSR Issues of the JFE Group

In response to the needs of various stakeholders, the JFE Group identified material CSR issues in FY2016 and set KPIs in FY2017 to find out where and how we should invest its resources to minimize negative social impact and maximize the Group's value creation. Such initiatives will demonstrate our Corporate Vision of "Contributing to society with the world's most innovative technology." We aim to contribute to the establishment of the Group's sustainable growth as well as sustainable society through the implementation of these initiatives.

Contributing to the Sustainable Development Goals (SDGs) through business activities

In September 2015, a United Nations Summit adopted 17 SDGs to be addressed through worldwide efforts to achieve sustainable development. In response to requests from global society, the JFE Group will strive to contribute to SDGs through its business activities.



Corporate Vision: Contributing to Society with the World's Most Innovative Technology

Areas of Focus		Details	Scope of Influence	Material CSR Issues	Relevant SDGs
Activity	Provide quality products (customer satisfaction)	<ul style="list-style-type: none"><li>Provide products and services based on advanced technologies</li><li>Continue stable supply of safe, high-quality products</li><li>Solve customer problems</li></ul>	JFE Group Customers Society	Stably supply products	7 9 10 11 12 13 17
				Ensure quality	
				Pursue R&D operations	
				Respond to customer needs	
Activity	Protect the global environment	<ul style="list-style-type: none"><li>Mitigate environmental impact</li><li>Contribute to recycling societies</li><li>Utilize Group technologies to develop products that contribute to environmental protection</li></ul>	JFE Group Local communities near manufacturing sites Customers Society	Develop and provide environmentally friendly products	6 7 9 12 13 14
				Mitigate climate change	
				Protect the global atmosphere	
				Pursue resource recycling	
Activity	Ensure occupational safety and health	<ul style="list-style-type: none"><li>Prioritize safety first</li><li>Maintain the physical and mental health of employees and their families and create rewarding workplaces</li></ul>	JFE Group Suppliers Business partners	Prevent workplace accidents	3 8
				Ensure the health of employees and their families	
Activity	Recruit and nurture diverse human resources	<ul style="list-style-type: none"><li>Maintain work environments where all personnel can maximize their abilities</li><li>Accumulate and hand down technologies and skills</li></ul>	JFE Group Business associates	Pursue diversity and inclusion	4 5 8 9 10
				Strengthen human resource development programs	
Basis of activity		Thoroughly enforce compliance	JFE Group Suppliers Political authorities Society	Ensure adherence to Corporate Ethical Standards and compliance	10 16

Increased corporate value and sustainable growth of the JFE Group

Goals

Help realize sustainable society

Corporate Governance (Ensure Fairness, Objectivity and Transparency)

Respect and Maintain Awareness of Human Rights

FY2016: Identification of Material CSR Issues

Step 1 Identification

By measuring the businesses of the JFE Group against the following yards ticks, we have identified 35 core issues for our CSR initiatives:

- GRI G4 Sustainability Reporting Guidelines
- ISO26000
- Sustainable Development Goals (SDGs)
- ESG survey via external assessment
- Internal documents on employee satisfaction surveys, etc.
- Benchmark surveys on the three business areas

Step 2 Prioritization (Group-wide Meeting)

We prioritized the above 35 issues in two ways: stakeholder expectations and relevance to business (societal impact), and identified 13 issues in five focus areas.

**Group-wide meeting**

Managers from each operating company discussed the prioritization from the perspectives of group management and their respective operating companies' interests.

Step 3 Validation

The following process validated the material CSR issues identified:

- Confirmation and examination by each operating company
- Two-stage examination and approval by JFE Group CSR Council\*

\*Participants included the President of JFE Holdings (chairperson), executive vice president, Corporate Officers, full-time Audit & Supervisory Board Members, and the presidents of operating companies, etc.

FY2017: Setting KPIs

Step 4 Review / Setting KPIs

**Conducting reviews**

- Reviewed by the JFE Group CSR Council
- Examined comments by third-party experts on the CSR report

**Setting KPIs**

We set KPIs and implemented PDCA through the following processes.

- Review was conducted by each operating company
- Draft KPIs were submitted to the JFE Group Environmental Committee
- KPIs were deliberated at and approved by the JFE Group CSR Council

KPIs for Material CSR Issues

-Performance in FY2018 and revisions for FY2019 and beyond-

To address material CSR issues identified in FY2016, the JFE Group has set KPIs and has been working on the issues on a group-wide basis.

Based on the performance and efforts implemented in FY2018, we partially revised KPIs to be adopted in FY2019 and beyond.

We will continuously take into consideration the business characteristics of each operating company upon setting KPIs, aiming to facilitate PDCA cycle and effective CSR management.

JFE Steel

JFE Engineering

JFE Shoji Trade

○: Fully accomplished

△: Partly accomplished

✕: Not accomplished

Areas of Focus		Material CSR Issues	Operating company	KPIs	Results and initiatives implemented in FY2018	Evaluation	KPIs for FY2019
Activity	Provide quality products (customer satisfaction)	Stably supply products	<div></div>	• Make steady progress on strengthening its manufacturing base to ensure stable supply	• Stable provision to customers was unsuccessful due to equipment problems, but capital investment for the establishment of manufacturing bases, with focus on upstream processes, was implemented	△	• Stable products supply to customers through steady operations • Make steady progress on strengthening its manufacturing bases, starting with blast furnace stabilizing measures
			<div></div>	• Secure a stable number of certificated managing engineers	• Revenue reached record-high in FY2018, while the stable number of managing engineers was successfully secured	○	• Secure a stable number of certificated managing engineers
			<div></div>	• Make consistent capital investment in processing and distribution operations	Amount of investment • Investment in quality enhancement: 8.2 billion yen • Renewal and safety investment: 3.5 billion yen • System investment: 3.1 billion yen	○	• Make consistent capital investment in processing and distribution operations
		Ensure quality	<div></div>	• Improve the level of quality assurance and product testing	• Capital investments regarding improving the level of quality assurance and product testing are progressing according to plan	○	• Implementation of the capital investments for improving the level of quality assurance and product testing established in the Sixth Medium-term Business Plan
			<div></div>	• No major quality problems	• No major quality problems	○	• No major quality problems
			<div></div>	• Conduct quality audits on affiliate companies	• Conducted quality audits at least once annually on 30 manufacturing affiliate companies • Audit executing rate: 100% (Japan: 16 companies; overseas: 14 companies)	○	• Continue to conduct quality audits at least once annually on 30 manufacturing affiliate companies (audit executing rate: 100%)
		Pursue R&D operations	<div></div>	• Make consistent or increased investment in R&D operations	• Increased R&D budget by 12% compared to FY2017	○	• Conduct R&D operations established in the Sixth Medium-term Business Plan
			<div></div>	• Make consistent or increased investment in R&D operations	• Investment amount is maintained and increased FY2017: 3.8 billion yen* FY2018: 4.1 billion yen* (8% growth from FY2017)	○	• Make consistent or increased investment in R&D expenses
		Respond to customer needs	<div></div>	• Build infrastructure that improves customer satisfaction, and strengthen training for sales personnel	Building of infrastructure • Promoted implementation of an inquiry-based workflow system • Made inventory and work-in-process items information browsable on mobile devices Training for sales personnel • Rank-based training within the sales department (newly appointed sales employees, mid-rank sales employees, General Managers, Office heads Added quality assurance (QA) training in FY2018)	○	• Implement rank-based training within the sales department and ensure all employees receive training within two years from assignment • Implement customer satisfaction surveys and give thorough feedback
			<div></div>	• Use data collected from customer surveys to enhance customer satisfaction	• Gave feedback through work performance assessment notices for public works, and the QMS customer surveys for private works	○	• Use data collected from customer surveys to enhance customer satisfaction
			<div></div>	• Invest in the development of strong sales personnel	• Provided employee training such as skill development, and group training in Japan for staff from overseas offices, as scheduled (100%)	○	• Ensure that all target employees receive employee training such as skill development, and that all target staff from overseas offices receive group training in Japan
	Protect the global environment	Develop and provide environmentally friendly products	<div></div>	• Expand the environmentally friendly products and technological offerings	• Developed EXPAL (short for "extend painted life") steel sheet and topology optimization (weight reduction of parts) technology, etc.	○	• Develop new products and technologies established in the Sixth Medium-term Business Plan
		Mitigate climate change	<div></div>	1. CO <sub>2</sub> reduction target defined in the Japan Iron and Steel Federation's "Commitment to a Low Carbon Society" 2. Continue to invest in energy conservation	1. Working towards the FY2020 target defined in the Japan Iron and Steel Federation's "Commitment to a Low Carbon Society" 2. Made capital investment in energy conservation	○	1. CO <sub>2</sub> reduction target defined in the Japan Iron and Steel Federation's "Commitment to a Low Carbon Society" 2. Continue to invest in energy conservation

\*R&D investments for the current fiscal year

		JFE Steel			JFE Engineering			JFE Shoji Trade			○: Fully accomplished △: Partly accomplished ×: Not accomplished	
Areas of Focus		Material CSR Issues	Operating company	KPIs	Results and initiatives implemented in FY2018			Evaluation	KPIs for FY2019			
Activity	Protect the global environment	Develop and provide environmentally friendly products  Mitigate climate change	<div></div>	● Contribute to climate change mitigation through our products and services	● Amount of CO <sub>2</sub> reduced by renewable-energy power generation plants we introduced 4.12 million t-CO <sub>2</sub> per year			○	1. Contribute to global environment conservation through our products and services ● Spread of waste-to-energy plants ● Spread of woody biomass power generation ● Energy conservation in water and sewage facilities ● Spread of geothermal, solar and wind power ● Spread of sewage sludge energy plants ● Provide electricity from renewable sources 2. Reduce CO <sub>2</sub> emissions in factories and offices			
		Protect the global atmosphere	<div></div>	1. Continue to work on keeping NOx and SOx emissions at low levels 2. VOC emissions: maintain at low levels (30% decrease compared to 2000) 3. Benzene emissions: maintain at low levels (80% decrease compared to 1999) 4. Dichloromethane emissions: maintain at low levels (40% decrease compared to 1999) Items 2. to 4. were added during the fiscal year for KPIs enrichment	1. NOx and SOx emissions were kept at low levels through thorough combustion-control 2. VOC emissions: 51% decrease 3. Benzene emissions: 93% decrease 4. Dichloromethane emissions: 68% decrease			○	1. Continue to work on keeping NOx and SOx emissions at low levels 2. VOC emissions: maintain at low levels (30% decrease compared to 2000) 3. Benzene emissions: maintain at low levels (80% decrease compared to 1999) 4. Dichloromethane emissions: maintain at low levels (40% decrease compared to 1999)			
			<div></div>	—	—			—	● Continue to work on keeping NOx and SOx emissions at low levels			
		Pursue resource recycling	<div></div>	1. Maintain the efficient use of water resources Recycling rate: At least 90% 2. Recycling rate of co-products: At least 99% *For KPIs enrichment, item 1.'s numerical goal and item 2. were added during the fiscal year.	1. Recycling rate: 93.5% 2. Recycling rate: 99.7%			○	1. Maintain the efficient use of water resources Recycling rate: At least 90% 2. Recycling rate of co-products: At least 99%			
			<div></div>	● Recycle at least 99.5% of rubble ● Recycle at least 95.0% of sludge ● Recycle at least 85.0% of industrial waste	● Rubble recycled: 99.6% ● Sludge recycled: 98.8% ● Industrial waste recycled: 91.0%			○	1. ● Recycle at least 99.5% of rubble ● Recycle at least 95.0% of sludge ● Recycle at least 85.0% of industrial waste 2. Recycling rate of office resources (Yokohama Head Office): At least 98% 3. Promote the recycling business (plastics, food, consumer appliances, fluorescent tubes, etc.)			
			<div></div>	● Global recycling of steel scraps	● Increased the volume of scrap transactions compared to FY2017 (+1.4%) ● In addition to exports from Japan, we increased offshore trading, such as small-lot transactions through containers in the ASEAN region			○	● Continue to implement measures that increases the volume of scraps compared to FY2017 (FY2020 target: 3% increase from FY2017)			
	Ensure occupational safety and health	Prevent workplace accidents	Group-wide	● Workplace fatalities: zero occurrences	● Workplace fatalities: 2 ● Introduced internal audit system ● Installed safety monitors			×	● Workplace fatalities: zero occurrences			
		Ensure the health of employees and their families	Group-wide	● Provision rates of health guidance (by 2020) <div></div> 35% <div></div> 35% <div></div> 40%	● Actual rates of health guidance <div></div> 56.9% <div></div> 22.1% <div></div> 45.2% ● Made use of health guidance institutes ● Encouraged the people who had not taken health guidance to do so			△	● Provision rates of health guidance (by 2020) <div></div> 35% <div></div> 35% <div></div> 40%			
				● Rate of health examination for dependents: 60% (by 2020)	● Rate of health examination for dependents <div></div> 52.3% <div></div> 54.2% <div></div> 52.4% ● Active promotion throughout the workplace and through health insurance union			×	● Rate of health examination for dependents: 60% (by 2020)			
	Recruit and nurture diverse human resources	Pursue diversity and inclusion	Group-wide	● Ratio of female recruits <div></div> Career-track white-collar positions At least 35% Career-track technical positions At least 10% On-site positions At least 10% <div></div> Career-track white-collar positions At least 20% Production/construction positions (technical) At least 5% <div></div> Career-track white-collar positions At least 25%	● Ratio of female recruits <div></div> Career-track white-collar positions 43% Career-track technical positions 12% On-site positions 12% <div></div> Career-track white-collar positions 22% Production/construction positions (technical) 20% <div></div> Career-track white-collar positions 28%  ● Made a website and brochures for female candidates for career-track positions			○	● Ratio of female recruits <div></div> Career-track white-collar positions At least 35% Career-track technical positions At least 10% On-site positions At least 10% <div></div> Career-track white-collar positions At least 20% Production/construction positions (technical) At least 5% <div></div> Career-track white-collar positions At least 25%			
				● Females in managerial positions: triple the August 2014 figure (by 2020)	● Females in managerial positions: 3.3 times the August 2014 figure			○	● Females in managerial positions: 5 times the August 2014 figure (by 2025)			
		Strengthen human resource development programs	Group-wide	● Improve technical skills and conduct high-quality human resource development programs	● Human resource development programs with various educational systems			○	● Improve technical skills and conduct high-quality human resource development programs			
	● 100% attendance from the target audience for human rights awareness training			● Implemented rank-based training			○	● 100% attendance from the target audience for human rights awareness training				
Basis of activity	Thoroughly enforce compliance	Ensure adherence to Corporate Ethical Standards and compliance	Group-wide	● Steady execution of training to foster and maintain a sense of compliance	● Implemented rank-based compliance training, etc.			○	● Steady execution of training to foster and maintain a sense of compliance (100% achievement)			
				● Improve employee awareness of ethics reflected in the Corporate Ethics Awareness Surveys	● Tackled issues identified from the last awareness survey Measures implemented: 1. Established an external hotline, and amended internal reporting regulations 2. Promoted work style reforms (working at home, encouraging employees to take paid leaves, etc.)			—	● Improve employee awareness of ethics reflected in the Corporate Ethics Awareness Surveys ● Have all employees participate in the Corporate Ethics Awareness Survey			

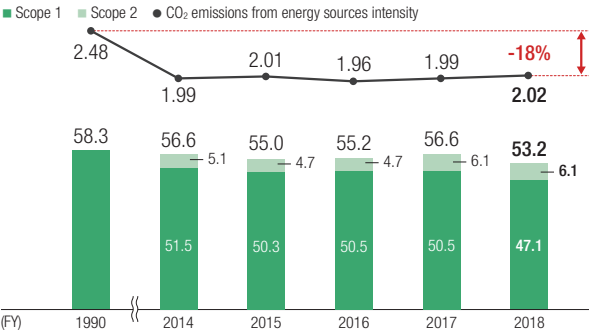
\* Next awareness survey to be conducted in FY2019



Non-financial Highlights

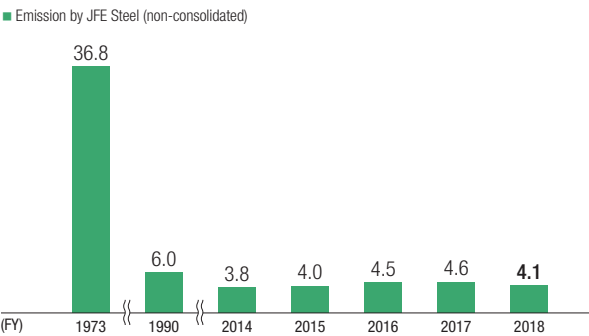
Environmental Indicators

CO<sub>2</sub> emissions from energy sources (million t-CO<sub>2</sub>) and CO<sub>2</sub> emission intensity (t-CO<sub>2</sub>/t-s) of JFE Steel

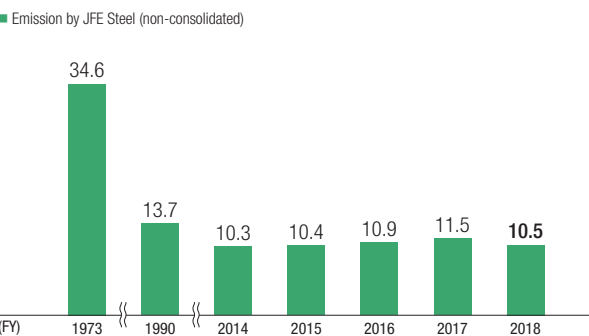


\*1. The CO<sub>2</sub> coefficient for electricity purchased in FY2018 is that of FY2017 on the Japan Iron and Steel Federation's Commitment to a Low Carbon Society.  
\*2. Data for certain fiscal years have been recalculated retroactively for improved accuracy.

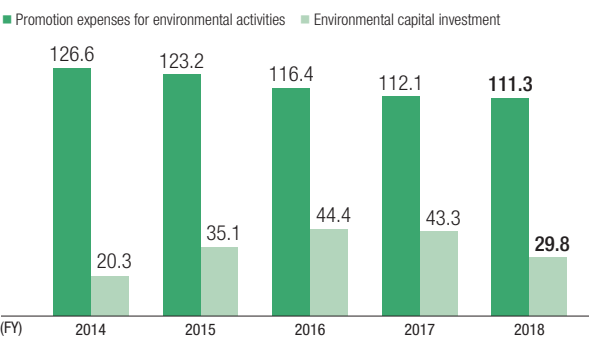
SO<sub>x</sub> emissions by JFE Steel (million Nm<sup>3</sup>)



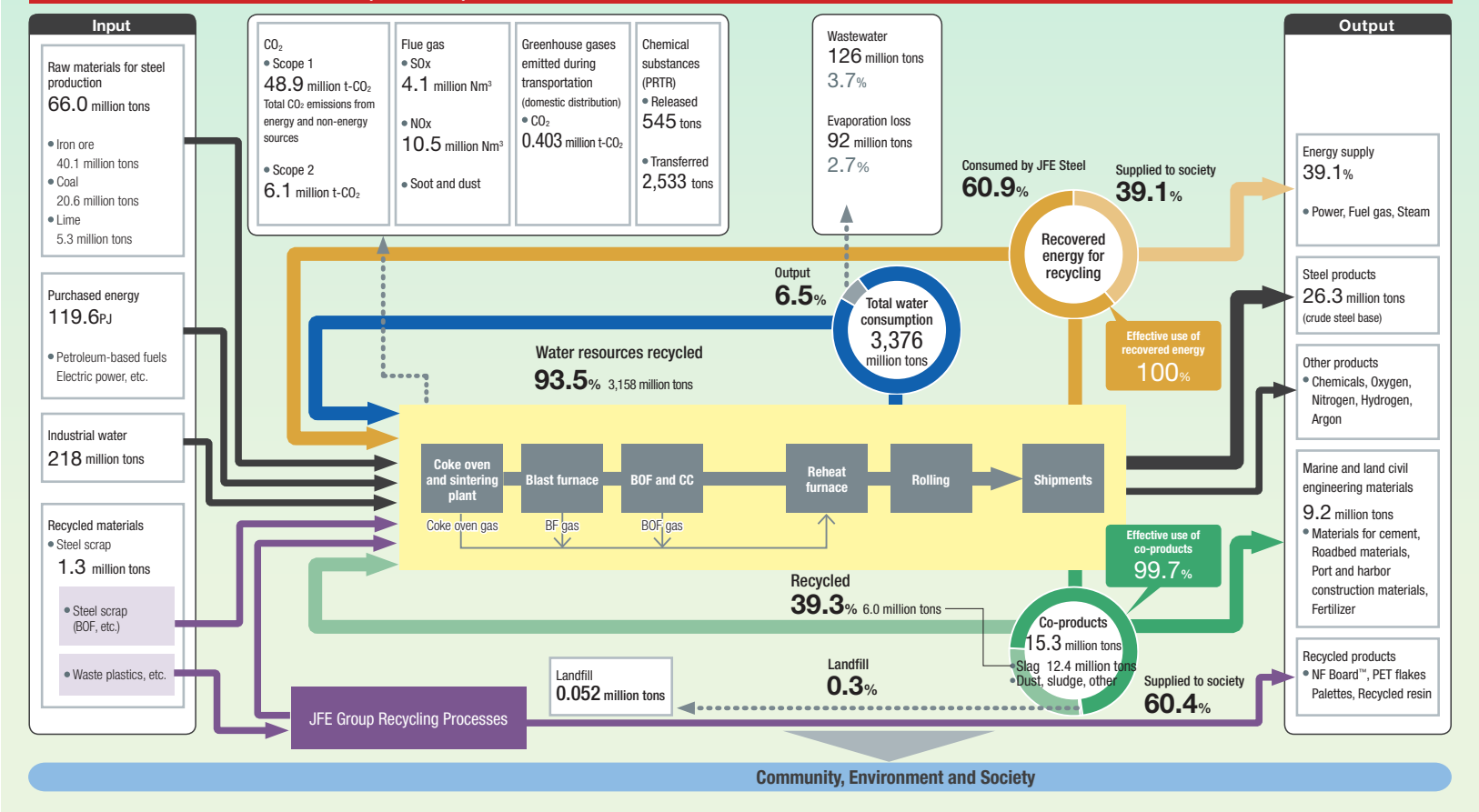
NO<sub>x</sub> emissions by JFE Steel (million Nm<sup>3</sup>)



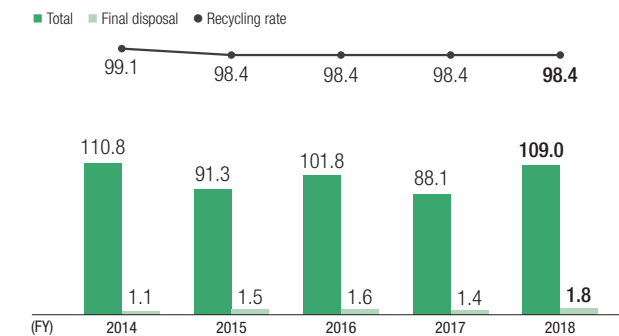
Environmental capital investment (billion yen) and promotion expenses for environmental activities (billion yen) of JFE Steel



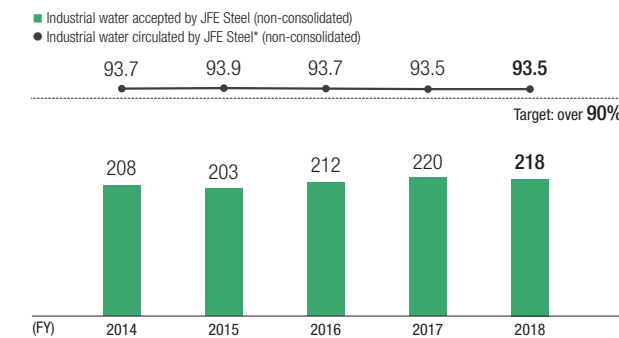
Material flow in the steel business (JFE Steel)



Waste generated at construction sites (thousand tons) and recycling rate (%) of JFE Engineering

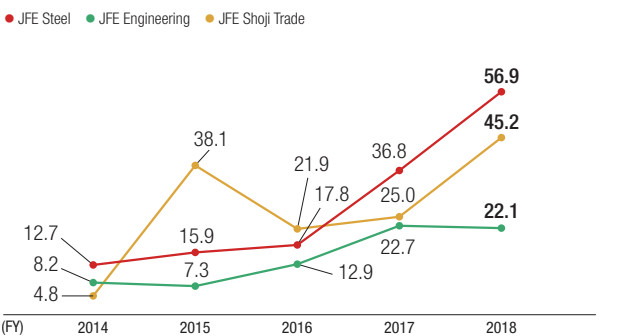


Industrial water accepted (million tons) and circulated (%) of JFE Steel

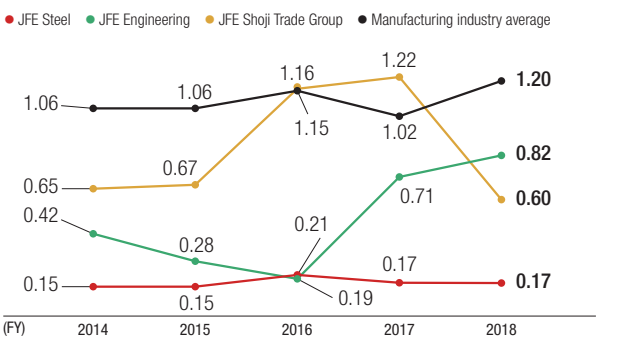


\*Industrial water circulated (%) = (Total amount - industrial water accepted) / total amount × 100

Provision rates of health guidance (%)



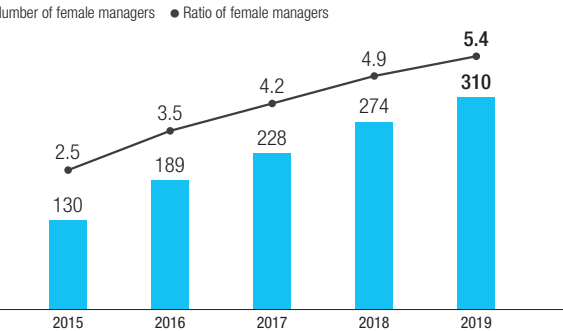
Lost-work Injuries



\*JFE Steel and JFE Engineering: parent company, business associates and contractors;  
JFE Shoji Trade: domestic parent and group companies, business associates and contractors  
\*Lost-work injuries = Number of lost-time injuries / number of hours worked × 1,000,000

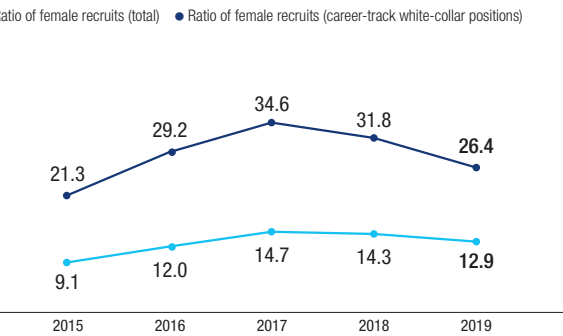
Societal Indicators

Number of female managers (persons) and ratio of female managers (%)



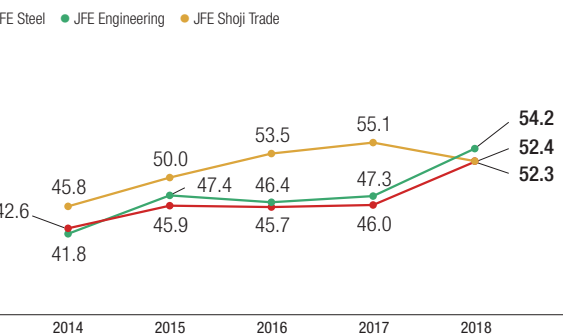
\*Scope of calculation: JFE Holdings and operating companies

Ratio of female recruits (total) (%) and ratio of female recruits (career-track white-collar positions) (%)



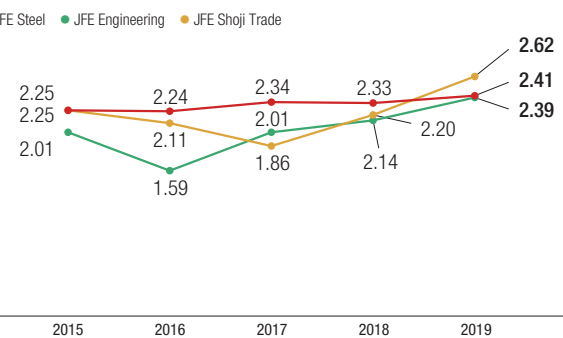
\*Scope of calculation: total of three operating companies

Rate of health examination for dependents (%)



\*Target: dependents aged 40 or older (including dependents other than spouses)

Employment of people with disabilities (as of June 1 of each year) (%)



## JFE Group's Initiatives for Climate Change Issues

To build a sustainable society, the JFE Group works to respond to climate change risks with cutting-edge technology, contributing to a resilient societal framework.

## ● Basic Policy

The JFE Group's business involves steel manufacturing, which emits massive amounts of CO<sub>2</sub>. That is why climate change issues are serious management issues from the viewpoint of business continuity. The steel business accounts for 99.9% of the JFE Group's CO<sub>2</sub> emissions. The JFE Group is able to manufacture steel with the lowest CO<sub>2</sub> emission intensity among all the integrated steel mills in the world through developing diverse technologies that enable energy saving and CO<sub>2</sub> emission reduction, and applying them to our iron and steelmaking processes. We will continue developing processes to reduce environmental impact and spread our vast accumulated technologies globally for new opportunities, in order to contribute to mitigating climate change.

CO<sub>2</sub> intensity index1990  
100Eco-process/  
Innovative  
technologies

Coke dry quenching (CDQ)



Top pressure recovery turbine (TRT)

Regenerative burners

Endless hot strip rolling

Injecting Waste Plastic  
into Blast Furnaces

Super-SINTER™

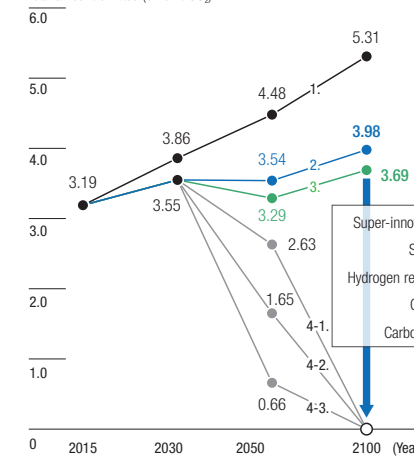
CO<sub>2</sub> emissions in terms of projected scenarios of long-term climate change mitigation

1. BAU Scenario\* 2. Maximum BAT Scenario\* 3. Maximum Innovative Technologies Scenario

Level attained through super-innovative technology development scenario

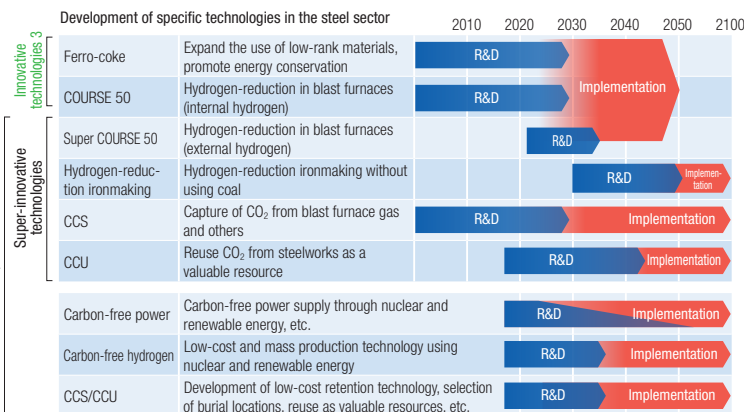
4-1. Low 4-2. Medium 4-3. High

Crude steel production Pig iron production

Total amount emitted (billion t-CO<sub>2</sub>)

Source: Compiled based on information provided by the Japan Iron and Steel Federation

## Initiatives toward a long-term vision for climate change mitigation



Source: Compiled based on information provided by the Japan Iron and Steel Federation

## ● Long-term vision and direction

The Japan Iron and Steel Federation, to which JFE Steel, the steel operating company of JFE Group, belongs to, has set 2030 as the target year to achieve its Commitment to a Low Carbon Society. In addition, in November 2018, the Federation established and announced the Japan Iron and Steel Federation's long-term vision for climate change mitigation for 2030 and beyond, which ultimately aims for Zero Carbon Steel production. JFE Steel played a pivotal role in the development of this long-term vision.

To help achieve the Paris Agreement's long term goal of holding the average global temperature rise well below 2°C, the company continues to develop and spread required technologies and contribute to playing its part in mitigating climate change.

Worldwide  
efforts

1997 Adoption of the Third Conference of the Parties (COP3)'s "Kyoto Protocol"  
2008 Commencement of the Japan Iron and Steel Federation's "Voluntary Action Plan"  
2013 Commencement of the Japan Iron and Steel Federation's "Commitment to a Low Carbon Society"

2015 Adoption of the Twenty-First Conference of the Parties (COP21)'s "Paris Agreement"  
2018 Announcement of the Japan Iron and Steel Federation's long-term vision for climate change mitigation (Zero Carbon Steel)

## Eco product

UNIHITEN™



Crack arrest technology



1.5 GPa-grade cold-rolled automotive steel sheet



Electrical steel sheet: JNP™ series



## Renewable Energy

Wind power



Solar power



Geothermal power

Utilization of waste  
and biomass

Waste-to-energy power



Biogas power



Wood biomass power

Products for  
adapting to  
climate change

Disaster prevention and reduction



Smart agriculture (agricultural resilience)



## ● Efforts up to the present

The JFE Group develops and possesses many environmentally friendly products and technologies which help customers save energy at the stage of consumption, such as high-performance steel materials and power generation using renewable energy. We see this as an opportunity to contribute to mitigating climate change issues.

## ● Long-term vision

Reduction of weight and the electrification of automobiles are expected to be further advanced in the future, through enhancing the functions of its high-tensile and electrical steel sheets, the JFE Group will contribute to such advancements. Also, while contributing to the further spread of renewable energy, we plan to help reduce CO<sub>2</sub> through our recycling business and efforts in resource-saving. Moreover, to prepare for the gradually intensifying climate crisis, we plan to contribute to national resilience through providing steel for societal infrastructure and put it into use for construction.

FY2017  
29.73  
million t-CO<sub>2</sub>Contribute to the reduction of CO<sub>2</sub> emissions by providing high-performance steel materials (Results of Eco Product)

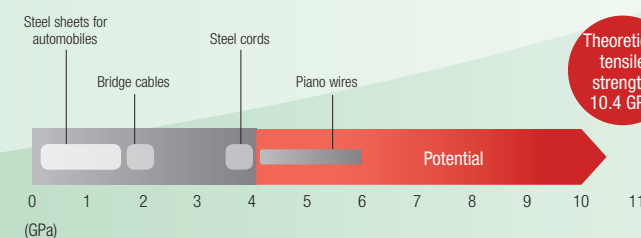
(Source: Information provided by the Japan Iron and Steel Federation)

FY2018  
4.12  
million t-CO<sub>2</sub>Amount of CO<sub>2</sub> reduced through renewable energy plants (Estimation by JFE Engineering)

## ● Further enhanced steel materials that contribute to a prosperous future

We have greatly enhanced the mechanical and electromagnetic characteristics of our steel materials. For example, since the 1970s, our steel sheets for automobiles have been increasingly strengthened in response to various social backgrounds and demands. The reduced weight of automobiles led to lower fuel consumption, which in turn contributed significantly to reducing CO<sub>2</sub> emissions. However, the characteristics level of enhanced tensile strength of our steel is only 1/10–1/3 of the theoretical limit. Aside from further strengthening its steel products, the Japanese steel business will provide the fundamental materials for future society through developing next-generation steel products for future hydrogen infrastructure, as well as contribute to the reduction of CO<sub>2</sub> emissions throughout the lifecycle of such products.

## Tensile strength of steel actualized in 2019 (GPa)



Source: Charts and text based on information provided by the Japan Iron and Steel Federation



## Scenario Analysis

The JFE Group will disclose information on risks and opportunities regarding climate change issues, such as scenario analysis, in line with the TCFD recommendations.

JFE Holdings declared its agreement with the summary of the Final TCFD\* Report, released on May 27, 2019.

\*The Task Force on Climate-Related Financial Disclosures, established by the Financial Stability Board (FSB), based on the opinions of G20 Finance Ministers and Central Bank Governors.



### Information disclosure following TCFD recommendations

#### TCFD recommendations

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

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

Summary of TCFD recommendations	JFE's disclosure (relevant sections in the CSR report)
Governance: Disclose the organization's governance associated with climate-related risks and opportunities	
a. Describe the Board of Directors' oversight of climate-related risks and opportunities	Overview of the corporate governance system
b. Describe assessment of climate-related risks and opportunities, and management's role in company management	Risk management
Strategy: Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's business, strategy, and financial planning (if those information is important)	
a. Describe the climate-related risks and opportunities over the short, medium, and long term the organization has identified	Describe the results of the current scenario analysis
b. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning	Describe the results of the current scenario analysis
c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C scenario	Describe the results of the current scenario analysis
Risk management: Disclose the processes used by the organization to identify, assess, and manage climate-related risks	
a. Describe the organization's processes for identifying and assessing climate-related risks	Risk management Environmental management system
b. Describe the organization's processes for managing climate-related risks	
c. Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	
Indices and targets: Disclose the indices and targets used to assess and manage climate-related risks and opportunities	
a. Disclose the indices used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management	KPIs for Material CSR Issues
b. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	JFE Group's CO <sub>2</sub> emissions / CO <sub>2</sub> emissions in the value chain
c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets	KPIs for Material CSR Issues

### Projected Scenarios

#### Scenario analysis

While correctly understanding the risks and opportunities related to climate, we evaluate the effects they have on current business strategies, and utilize them in establishing future strategies. Due to our business having the potential to be significantly affected by climate change, we have set the following two scenarios.

Both scenarios are based on the scenarios announced by the International Energy Agency (IEA). The analysis was performed under the assumption that carbon pricing would be introduced into major CO<sub>2</sub> generating countries in order to achieve the 2°C target.

Projected scenarios		2°C scenario	4°C scenario
Reference scenarios	Transition	Transition scenarios by the International Energy Agency (IEA) <ul style="list-style-type: none"><li>• Sustainable Development Scenario (SDS)<sup>*1</sup></li><li>• 2°C scenario (2DS)<sup>*2</sup></li></ul>	Transition scenarios by the International Energy Agency (IEA) <ul style="list-style-type: none"><li>• New Policies Scenario (NPS)<sup>*1</sup></li><li>• Reference Technology Scenario (RTS)<sup>*2</sup></li></ul>
	Physical effects	Estimate scenario of climate change by the United Nations' Intergovernmental Panel on Climate Change (IPCC) <ul style="list-style-type: none"><li>• Representative Concentration Pathways Scenario (RCP)<sup>*3</sup></li></ul>	
Social vision		Bold policies and technological reforms will be undertaken to hold the increase in the global average temperature below 2°C until the end of the century, and to achieve sustainable development. Societal changes that come alongside decarbonization are assumed to affect business. <ul style="list-style-type: none"><li>• Worldwide/industry-wide common carbon pricing<sup>*4</sup></li><li>• Increase in ratio of electric cars in automobile sales</li></ul>	Even with the new policies in various countries stipulated in accordance with the Paris Agreement, including Intended Nationally Determined Contribution (INDC), the global average temperature will rise up to 4°C by the end of the century. Climate changes such as rising temperatures are assumed to affect business. <ul style="list-style-type: none"><li>• Increase in frequency of flood damages</li><li>• Rise in sea level</li></ul>

\*1 Source: IEA "World Energy Outlook 2018" \*2 Source: IEA "Energy Technology Perspectives 2017" \*3 Source: IPCC "Fifth Assessment Report"

\*4 Carbon pricing differences among countries may widen the global industrial competitiveness between countries with strict CO<sub>2</sub> emission restrictions and those with more lenient ones, potentially resulting in carbon leakage (countries with stricter restrictions decrease production and investments, reducing CO<sub>2</sub> emissions, while those with more lenient restrictions increase production and investments, increasing CO<sub>2</sub> emissions). The reference scenario SDS assumes that developed countries and certain developing countries have implemented carbon pricing. Based on this SDS, the JFE Group has set the 2°C scenario under the assumption that carbon pricing would be introduced into major CO<sub>2</sub> generating countries in order to achieve the 2°C target.

#### Relevant businesses and period for analysis

Relevant businesses of the scenario analysis were JFE Steel: steel business; JFE Engineering: engineering business; JFE Shoji Trade: trading business; and businesses of certain Group companies. The period for analysis was set to be up to 2050.

#### Compatibility with the Japan Iron and Steel Federation's long-term vision for climate-change mitigation

The Japan Iron and Steel Federation's long-term vision for climate-change mitigation ultimately aims for Zero Carbon Steel by 2100. On the other hand, the period for scenario analysis was set to 2050, in an aim to ensure the resilience of the JFE Group's business strategies at certain phases during the long-term challenge.

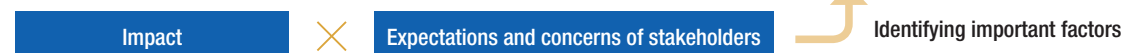
### Identification processes of important factors affecting businesses

#### Identification processes of significant risk opportunities and factors

Step 1: Summarize factors that affect relevant businesses from a standpoint covering the value chain

Step 2: Study the factors comprehensively and take into account their "impact on the factors" as well as "expectations and concerns of stakeholders," thereby identifying especially important factors

	2°C scenario	4°C scenario
Impact on procurement		5. Procurement of raw materials becomes unstable due to increased frequency in climate disasters
Impact on direct business operations	1. Decarbonization in steel production processes 2. Increase in demand for the effective use of steel scraps	6. Damages to business bases due to climate disasters
Impact on demand for products and services	3. Change in demand for steel for automobiles and others 4. Increase in demand for solutions promoting decarbonization	7. National resilience



Criteria for identifying important factors: • Impact (possibility of risk opportunities impact upon occurrence) • Expectations and concerns of stakeholders

## Results of Scenario Analysis

	Societal changes and responses to changes		Expectations and concerns of stakeholders towards the JFE Group	Evaluation results
<b>2°C scenario</b> Important factor ① <b>Decarbonization in steel production processes</b>	Rising societal demands for decarbonization towards steel production processes	Implementation of innovative technologies that achieve large-scale decarbonization Implementation of carbon pricing	<ul style="list-style-type: none"> <li>Significant contribution through innovative technologies</li> <li>Increase in investment in the implementation of innovative technologies</li> <li>Increase in operation costs due to the introduction of carbon pricing</li> </ul>	<b>Opportunities</b> <ul style="list-style-type: none"> <li>Development and implementation of innovative technologies on top of existing technologies</li> </ul> <b>Risks</b> <ul style="list-style-type: none"> <li>Investment in the implementation of innovative technologies is possible</li> <li>Cost competitiveness is maintained when carbon pricing is implemented worldwide</li> </ul>
<b>2°C scenario</b> Important factor ② <b>Increase in demand for the effective use of steel scraps</b>	Increased focus on electric furnace method, which emits low levels of carbon	Rising expectations toward electric furnace steel Increase in scrap generation	<ul style="list-style-type: none"> <li>Replacement of converter steel with electric furnace steel</li> <li>Increase in JFE Group's production of electric furnace steel</li> </ul>	<b>Opportunities</b> <ul style="list-style-type: none"> <li>Restrictions on the amount of scrap provided, increase in production of converter steel</li> <li>Increase in production of electric furnace steel and the need for electric furnace engineering</li> <li>Expansion of the scrap logistics business</li> </ul>
<b>2°C scenario</b> Important factor ③ <b>Change in demand for steel for automobiles and others</b>	Change in automobile needs Rising demands for eco-friendly raw materials	Increase of EV motors Decrease of internal combustion engines Reduction of weight and the increased use of multi-materials Demand for decarbonization and recyclability	<ul style="list-style-type: none"> <li>Increase in demand for electrical steel sheets for EV motors</li> <li>Increase in demand for special steel due to the decrease of internal combustion engines</li> <li>Replacement of automobile steel due to the increased use of multi-materials</li> <li>Demand for further decarbonization and recyclability in steel production</li> </ul>	<b>Opportunities</b> <ul style="list-style-type: none"> <li>Increase in demand for electrical steel sheets due to more electric vehicles</li> <li>Increase in demand for special steel due to increase in automobile sales</li> <li>Increase in demand for high-tensile steel sheets for automobiles</li> <li>Refocus on the recyclability of steel</li> </ul> <b>Risks</b> <ul style="list-style-type: none"> <li>Limited impact of the increased use of multi-materials</li> </ul>
<b>2°C scenario</b> Important factor ④ <b>Increase in demand for solutions promoting decarbonization</b>	Shifting to decarbonization	Increase in demand for solutions promoting transition toward decarbonization Overseas development of energy conservation technologies	<ul style="list-style-type: none"> <li>Renewable-energy power generation plants</li> <li>Low-carbon business (Eco Solution) in developing countries using Best Available Technology (BAT) developed and commercialized in Japan</li> </ul>	<b>Opportunities</b> <ul style="list-style-type: none"> <li>Integrated constructions and operations of renewable energy (biomass, geothermal, and solar power) plants</li> <li>Integrated constructions and operations of waste incinerators and plastic recycling plants</li> <li>Integrated constructions of CCU and CCS facilities</li> <li>Overseas development of low carbon businesses</li> </ul>
<b>4°C scenario</b> Important factor ⑤ <b>Procurement of raw materials becomes unstable due to increased frequency in climate disasters</b>	Intensifying climate disasters alongside rising temperatures	Procurement of raw materials becomes unstable	<ul style="list-style-type: none"> <li>Procurement of raw materials becomes unstable</li> </ul>	<b>Risks</b> <ul style="list-style-type: none"> <li>Undergoing concrete measures "Alternative procurement methods and source distribution" "Strengthening equipment capabilities"</li> </ul>
<b>4°C scenario</b> Important factor ⑥ <b>Damages to business bases due to climate disasters</b>	Intensifying climate disasters alongside rising temperatures		<ul style="list-style-type: none"> <li>Increased damages due to typhoons and rainstorms</li> <li>Increased damages due to water shortages</li> <li>Flood damages due to rising sea levels</li> </ul>	<b>Risks</b> <ul style="list-style-type: none"> <li>Flood and water shortage response measures already in motion</li> <li>Flood impacts due to rising sea levels can be coped with the current measures</li> </ul>
<b>4°C scenario</b> Important factor ⑦ <b>National resilience</b>	Intensifying climate disasters alongside rising temperatures	Increase in importance of strengthening infrastructure Increased demand for disaster prevention products	<ul style="list-style-type: none"> <li>Contribution with steel and related products that help strengthen infrastructure</li> </ul>	<b>Opportunities</b> <ul style="list-style-type: none"> <li>Strengthening infrastructure with steel and related products</li> </ul>

## Summary of Scenario Analysis Evaluation

## FOCUS Important factor ① Decarbonization in steel production processes

The JFE Group promotes the development of innovative technologies to achieve decarbonization ahead of the rest of the world. With a financial base that enables investments following the implementation of innovative technologies, we hugely contribute to shifting to a carbon-free society.

JFE Steel has been actively working on developing energy saving technology to increase the efficiency and achieving decarbonization in the iron and steelmaking processes. We currently boast the world's top-class energy-efficient iron and steelmaking processing technologies. To make further progress toward decarbonization, we will promote development of innovative steel production processes (COURSE50, ferro-coke) that are expected to reduce CO<sub>2</sub> emissions through methods such as hydrogen-reduction and CCS.

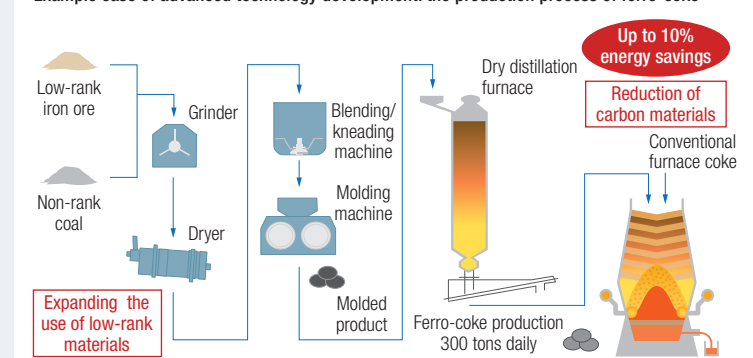
COURSE50 is aiming to reduce CO<sub>2</sub> emissions by approximately 30% in total: around 10% through hydrogen-reduction, and 20% through CCS. Equipment will be put in place by around 2030, and be introduced in stages by around 2050, in line with the timing of the renewal of blast furnace-related equipment. Ferro-coke, which improves the efficiency of iron-reduction in blast furnaces, is a technology that can significantly lower CO<sub>2</sub> emissions. Furthermore, to ultimately achieve Zero Carbon Steel, we will pursue challenges such as developing hydrogen-reduction ironmaking technologies in 2030 and beyond.

We view the introduction of these innovative technologies as one of the top priorities and push ahead with the initiative

in cooperation with the national government. We are maintaining a financial base that is resilient to these investments.

We are currently building medium-scale pilot plant equipment that produces 300t/d of ferro-coke at JFE Steel's West Japan Works (Fukuyama).

Example case of advanced technology development: the production process of ferro-coke



## Maintaining a cost competitiveness in response to the global introduction of carbon pricing

In the event that carbon pricing is introduced into major CO<sub>2</sub> generating countries, the increased operation costs will be reasonably reflected in steel product prices in and outside Japan, helping us maintain our cost competitiveness. Additionally,

steel emits the least CO<sub>2</sub> during its production among other competing materials, which makes it be more cost competitive than other materials.

## FOCUS Important factor ② Increase in demand for the effective use of steel scraps

While scrap reusing increases, the need for crude steel also increases in the long-term, resulting in the increase in pig iron production (converter steel) by use of blast furnaces. Also, the increased use of our electric furnaces, the use of integrated construction technologies for electric furnace, and the expansion of the steel scrap logistics provide numerous opportunities to the entire JFE Group.

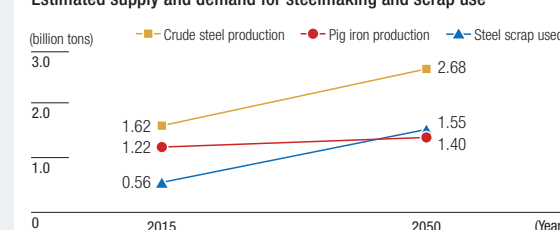
Steel scraps, the raw material for electric furnace steel, are almost fully retrieved and recycled and effectively reused in the advanced steel value chain. In the 2°C scenario, steel is used as a basic material to achieve SDGs, and the resulting increase in steel accumulation leads to the increased use in scrap. With the growth in population and the economy, the global demand for steel increases. To support the development

of a sustainable society, the production of pig iron (converter steel) by use of blast furnaces is expected to increase as well (The Japan Iron and Steel Federation: Long-term vision for climate change mitigation). Furthermore, with the current technological level, many high-grade steels can only be made from converter steel. Converter steel and electric furnace steel co-exist to serve different purposes.

The JFE Group sees opportunity in the rising need for electric furnace steel and the global increase of scrap. Alongside accelerating our electric furnace steel production, we utilize our integrated construction engineering technologies for cutting-edge energy-saving electric furnace equipment, whereby increasing our business opportunities. Also, we will develop other scrap application technologies, so as to expand the use of scrap in the whole steel industry.

On the other hand, increase in the use of scrap entails the expansion of the scrap logistics business, which leads to the growth of JFE Shoji Trade's logistics business.

Estimated supply and demand for steelmaking and scrap use



## JFE Group's Initiatives for Climate Change Issues

### FOCUS Important factor ③ Change in demand for steel for automobiles and others

While global automobile sales are rising, the demand for electrical steel sheets and special steel for EV motors is also experiencing an increase.

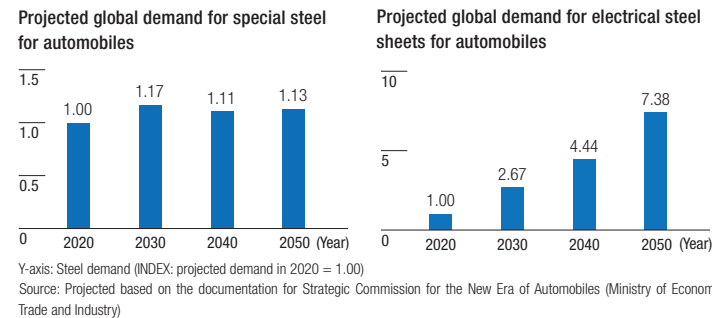
Strengthening of high-tensile steel for automobiles further contributes to weight reduction.

The transformation of automobiles to electrical vehicles will lead to a rapid increase in demand for electrical steel sheets for EV motors. JFE Steel added one of its Eco product, the non-oriented electrical steel sheet: JNE series, for motors, into its product line-up, garnering high market shares.

It is pointed out that the transformation of automobiles to electric vehicles could possibly decrease the use of special steel for engine-related components. Compared to a gasoline vehicle, amount of special steel used decreases roughly by 20% for hybrid vehicles, and by 40% for electric vehicles. However, even in the 2°C scenario, the number of automobile sales is expected to increase, resulting in the rising demand for special steel for automobiles as a whole. Therefore, relevant risk is considered small.

On the other hand, weight reduction in automobile frames is highly required for electric vehicles as well. JFE Steel has developed a 1.5 GPa-grade cold rolled steel sheet as one of its

Eco product, and has been successful in commercializing it as an automotive steel sheet. This steel sheet is extremely strong, and enables significant weight reduction in automobile frames. This brings huge reduction in CO<sub>2</sub> emissions during driving.



Steel demand rises, regaining attention to its high recyclability which contributes to decarbonization.

Steel is a material with high recyclability while still maintaining high quality, being able to be reproduced into diverse products as many times as required. Going forward, resource recycling is expected to be promoted in society as a whole, which in

turn contributes to decarbonization. In this respect, we expect the high recyclability of steel will be focused on again.

Limited effect of multi-material automobiles

Aluminum and carbon fiber reinforced plastic are considered alternate materials to reduce weight in automobiles. However, they are costly to produce compared to steel, and criticized due to high CO<sub>2</sub> emissions during their life cycles. Following this, in the 2°C scenario where carbon pricing is supposed to be introduced, the cost difference between steel and alternate materials will increase further. Therefore, although multi-materials can be introduced to a certain extent among luxury vehicles, their

effect on normal vehicles are considered limited. Moreover, even if aluminum is thoroughly used as a substitute in making panel parts such as doors of luxury vehicles, the estimated weight-reduction is only 5% of all the materials used for luxury and normal vehicles. Considering the increase in the number of automobiles produced, use of multi-materials is expected to have a limited effect on overall steel demand for automotive parts.

### FOCUS Important factor ④ Increase in demand for solutions promoting decarbonization

Contributing to providing solutions (renewable energy generation/recycling plants, energy-saving iron and steelmaking technologies).

The demand for power plants that employ renewable energy without emitting carbon is expected to significantly increase in the future. In the engineering field, the JFE Group's business involves the design, procurement, construction, and operation of power plants such as biomass, geothermal, and solar energy. Moreover, from the viewpoint of recycling and effective use of resources, we are also working to increase power generation amount at waste-to-energy plants. JFE Engineering is working to achieve full automation, which can lead to an increase in power generation amount by waste incinerators.

Additionally, we have also implemented measures to use recycled material in the production of plastic products, and to reduce the new adoption of materials that originate from fossil fuels. JFE Engineering's businesses consist of design, procurement, integrated construction and operation of recycling plants, while J&T Recycling Corporation plastic recycling.

Technological development of production processes is not enough to achieve absolute decarbonization in the industry as a whole. Therefore, the demand for CCU and

CCS (the effective use and storage of CO<sub>2</sub>) equipment is expected to increase. JFE Engineering is able to comprehensively conduct every phase of the design, procurement and construction of CCU and CCS equipment.

From the viewpoint of the steel industry, countries such as China, which makes up little less than 50% of global crude steel production, and India, whose production scale is expected to further increase, have ample potential to adopt Eco solution (energy-saving steelmaking technologies). If the advanced energy-saving technologies widely used in Japan are to be transferred and adopted on a global scale, the potential amount of global CO<sub>2</sub> reduction is well over 400 million t-CO<sub>2</sub>. (Japan's contribution in 2030 through Eco solution is estimated to be an 80 million t-CO<sub>2</sub>.)

Biomass power plant



Waste-to-energy plant



### FOCUS Important factor ⑤ Procurement of raw materials becomes unstable due to increased frequency in climate disasters

Responding to climate disasters through alternative procurement methods and source distribution, as well as strengthening equipment capabilities.

We mainly procure raw materials from Australia, where typhoon occurrences are expected to double. In the event that production and delivery come to a temporary halt in Australia, production will definitely be affected, and damages may occur depending on the situation.

To respond to this, we promote alternative procurement methods and source distribution, as well as strengthening equipment capabilities.

**Alternative procurement methods and source distribution:** By means of spot procurement from Chinese port inventories, increasing procurement from short-distance sources such as Russia and Indonesia, and making advanced purchases and new contracts of other brands at shipping ports in non-affected regions of Australia. Furthermore, we utilize the reserved inventory and outside yard of Philippine Sinter Corporation, a Group company.

**Strengthening equipment capabilities:** Through strengthening the production capabilities by installing new equipment and renewing existing ones, we enhance our adaptability and flexibility towards fluctuations in supply and demand.

### FOCUS Important factor ⑥ Damages to business bases due to climate disasters

Initiatives against floods and water shortages are currently at work. Effects of flood due to rising sea levels can be managed under the present circumstances.

Going forward, typhoons and rainstorms are expected to intensify, and disasters on par with the torrential rain in West Japan in 2018 are expected to increase in frequency. We are currently implementing measures to minimize damages. We have invested approximately 6.5 billion yen in our steelworks' flood response measures, such as strengthening sewage equipment. Moreover, we have invested approximately 3.5 billion yen in our steelworks' water shortage response measures, and have introduced equipment such as seawater desalination devices in some steelworks. There have been no significant water shortage disaster since 1994, but in

preparation for more frequent occurrence of water shortage going forward, we are working towards minimizing the damage.

All of our steelworks, located at coastal areas, are prone to floods due to rising sea levels. Sea levels are expected to rise 20-30 cm by around 2050 (approximately 70 cm in the case where climate change effect is at its peak in 2100). This will not be so serious as a sea level rise due to storm surge which may cause water intrusion, so the measures we are now working on seems effective. However, we will prepare for the future while analyzing climate disasters going forward.

### FOCUS Important factor ⑦ National resilience

Contributing to strengthening infrastructure by such means as high-strength H-shaped steel, high-strength steel pipe piles, and hybrid tide embankments.

Hybrid tide embankments



The JFE Group has taken the increasing frequency and intensity of climate disasters for years in Japan as serious matters. Since it is a material risk for the lives of our national citizens to be exposed to danger, we have made it our mission to introduce disaster prevention and reduction measures that maintain the functions of important infrastructure crucial to the livelihood and economic activities of national citizens, as well as to reinforce national resilience.

The JFE Group intends to work as a whole to contribute to the production of steels for construction such as high-strength H-shaped steel and high-strength steel pipe piles, to the making of products related to disaster response such as hybrid tide embankments, and also to the undertaking of infrastructure reconstruction.

### Responding to climate change

The JFE Group views responding to climate change as a serious management issue, and will accordingly disclose information on our response to risks and opportunities to support sustainable growth.

Responding to climate change is an extremely important management issue for the Group because this is not only related to the business risks, but also gives us opportunities to contribute to achieving a sustainable society.

TCFD, in its final recommendation report released in 2017, asked for companies' disclosure of resilient strategies against climate change, using the "scenario analysis" method. In May 2019, the JFE Group declared its agreement to the TCFD recommendations. In this report, we disclosed the relevant information for the first time in line with the recommendations, and showed not only how we would respond toward the risks in the 2°C and 4°C scenarios, but also how we would contribute to solving issues by means of innovative iron and steelmaking process development, environmentally friendly products and technologies, and national resilience, etc. We expect the information disclosed herein to be read through by our various stakeholders, especially investors, and in turn to serve as the material to gain their better understanding of the JFE Group's efforts.



JFE Holdings, Inc.  
Senior Vice President

Hiroyuki Fujiwara



# Human Resource Development for Sharing and Practicing Group Philosophy



As we state in the JFE Group’s Basic Stance on Human Resource Management, the Group steadily recruits diverse and skilled human resources, ensures that they acquire the skills and knowledge necessary to continue strengthening the Group’s technological capabilities, and nurtures their global capabilities in order for the Group to survive in an increasingly complicated and diversified global environment.

In addition, the JFE Group adheres to the philosophy of safety first, and, together with its Group companies and business associates, works to consistently maintain safe working environments and secure workplaces for all employees.

JFE Group’s Basic Stance on Human Resource Management

1

**Respect human rights and facilitate fair management of human resources**  
The Group manages human resources fairly by respecting the human rights of all employees and nurturing employees who embrace the Group’s corporate values and standards of business conduct.

2

**Foster a corporate culture that nurtures people and promotes satisfying workplaces**  
The Group facilitates interactive communication among employees to cultivate a corporate culture that nurtures human resources and creates safe, attractive environments where everyone can enjoy working.

3

**Diversify human resources**  
The Group ensures that diverse all people, including women, non-Japanese, the elderly and the disabled, can demonstrate their full potential.

4

**Recruit and steadily nurture excellent human resources**  
To survive in an increasingly complicated and diversified global environment, the Group steadily recruits diverse, high-quality skilled human resources, ensures that they receive the skills and knowledge necessary to continue strengthening the Group’s technological capabilities, and nurtures their global capabilities.

## Pursuit of diversity and inclusion

The JFE Group views the promotion of diversity as a key management issue, and promotes initiatives to maximize the abilities of employees with diverse backgrounds in terms of gender, nationality, values, or lifestyle, in order to swiftly and appropriately respond to the rapidly changing business environment.

The importance of diversity continues to rise in order to stably secure excellent human resources as the labor force decreases due to the low birth rate and aging population in recent years.

Due to a broad range of initiatives to support female employees, the ratio of female recruits for FY2019 for the three operating companies was approximately 13%.

Furthermore, the Group has set a numerical target to increase the number of female employees in management positions by 3 times (282 persons) from that as of August

2014, by 2020. As a result of pursuing an expansion of early appointment of female employees in management positions, the Group achieved the target in April 2019. In June 2019 JFE Holdings also appointed a female Audit & Supervisory Board Member.

## Human resource development and transfer of technologies and skills

The JFE Group is making a concerted effort to improve the abilities of each individual employee. JFE Steel, as the Group’s core business, undertakes the following initiatives.

**Human resource development at steelworks**

Because improvements in the skills of individuals is a source of competitive strength for steelworks to supply high-quality products, JFE Group steelworks have employed technical experts as full-time instructors to ensure the transfer of

high-level skills to new generations. Recently, IT technology such as virtual reality has been used to enhance the effectiveness of training, while on the other hand data science and other technologies have been utilized to realize the automation of steelworks operation itself.

**Global human resource development**

With the expectation of the JFE Group’s business expanding overseas in the future, younger employees are actively sent abroad to develop into global human resources from an early stage in their careers.

**Management training**

A long-running training program for potential Corporate Officers covering a total of 20 days over a period of seven months serves to train future management for JFE Steel and other Group companies. The program utilizes dialogue with the current management team as well as lectures or discussions with noted figures in various industries as outside instructors. In this way the participants learn the necessary knowledge, thinking, and grounding to become managers, reappraising management issues affecting their own companies while building their ability to formulate strategies. They also acquire a broader perspective toward the business environment and social trends.

## Promoting work style reforms

JFE Holdings and its operating companies have been proactively promoting work style reforms under the common understanding that it is indispensable to radically revamp conventional work styles, create new value through high productivity and fulfill a work style reform in which each employee can take pride and feel satisfaction in his or her work in order to address various management problems. We are promoting operational reforms by utilizing its systems and IT tools, while at the same time raising the awareness of each employee and maintaining a balance between work and life through such initiatives as encouraging no-overtime workdays and setting official days when employees are encouraged to take paid holidays. Furthermore, the company and its operating companies have introduced a telecommuting system, as a system to allow for more flexible work styles. Going forward, the Group will continue to focus its efforts on achieving more diverse work styles for its employees.

## Preventing occupational accidents

Some work areas in the JFE Group’s diverse scope of business require tasks with a comparatively high risk of accidents, including activities in elevated or hot environments, and the transportation of heavy objects. Having a safe work environment is crucial, and preventing workplace accidents is a fundamental requirement to provide peace of mind for employees, which include diverse human resources such as elderly people and women.

JFE Steel follows three basic strategies: promote the autonomous resolution of issues, strengthen health and safety at business associates and Group companies, and develop activities in line with the Group’s Health Declaration. By adopting specialized safety know-how developed by DuPont, JFE Steel is building a new safety culture, changing the focus away from the dependency of people doing only what they are told to do and toward the autonomy of people exercising their own initiative.

## Human rights initiatives

The JFE Group has for many years observed human rights through its Standards of Business Conduct, which mandate respect for individuals in the Group and greater society as well as nondiscrimination in all corporate activities. We also conduct our business based on the JFE Group Human Rights Basic Stance, which is aligned with international norms such as the United Nations’ Guiding Principles on Business and Human Rights.

In order to steadily work on human rights initiatives, the JFE Group Human Rights Promotion Council was established under the JFE Group Compliance Committee, to define Group-wide policies and exchange information with human rights promotion departments set up in the operating companies.

In FY2019, we invited external experts to speak about business and human rights at an internal seminar so as to gain understanding of international trends. Across the JFE Group we are working to increase awareness of human rights.

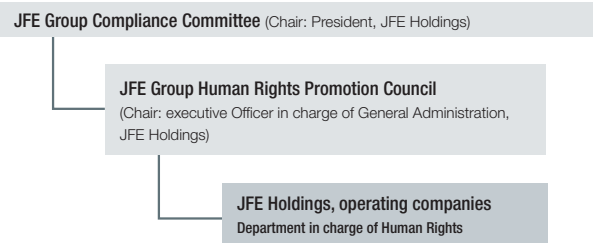
In order to establish and maintain a sustainable system for purchasing raw materials, JFE Steel purchases them with full consideration of respect for human rights, legal compliance, and environmental preservation in accordance with the Raw Materials Purchasing Policy of the company. We also post our purchasing policy on our website to provide information about our policy throughout the supply chain and have begun exchanging opinions with suppliers. Raw materials are purchased after investigating a supplier to confirm that they are not using conflict minerals.

Web

JFE Group Human Rights Basic Stance  
[https://www.jfe-holdings.co.jp/en/csr/society/human\\_rights\\_basic\\_policy/](https://www.jfe-holdings.co.jp/en/csr/society/human_rights_basic_policy/)

JFE Steel Raw Materials Purchasing Policy  
[https://www.jfe-steel.co.jp/en/company/purchase\\_policy.html](https://www.jfe-steel.co.jp/en/company/purchase_policy.html)

### Human rights promotion structure



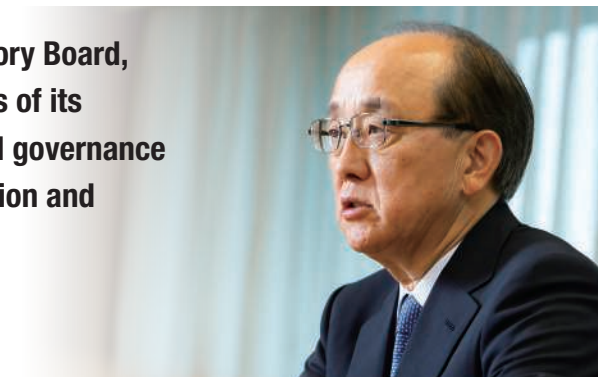




## As a company with an Audit & Supervisory Board, JFE Holdings enhances the effectiveness of its management oversight through a hybrid governance system that includes voluntary Nomination and Remuneration committees.

Representative Director,  
President and CEO JFE Holdings, Inc.

Koji Kakigi



I think JFE Holdings' governance system has two main characteristics. The first is independent Audit & Supervisory Board Members with strong authority over a broad range of Group businesses, and the second is the voluntarily Nomination and Remuneration committees to ensure objectivity and transparency.

JFE's three operating companies—JFE Steel, JFE Engineering and JFE Shoji Trade—together with many Group and partner companies, are engaging in a wide range of businesses. Managing risks throughout the Group while enhancing the autonomy and efficiency of each operating company is essential to continuously increase corporate value.

To achieve this, JFE facilitates fast decision-making by delegating authority to its operating companies through a pure holding company system and corporate officer system. JFE Holdings has also adopted a governance system where members of its independent Audit & Supervisory Board, a standard system used in Japan, serve four-year terms with strong authority to audit the execution of duties by Directors and business throughout the entire Group. In addition, governance is strengthened and information is shared throughout the Group by having JFE Holdings Directors and Corporate Officers also serve as Directors of the operating companies and members of JFE Holdings Audit & Supervisory Board serve as members of the Audit & Supervisory Boards of the operating companies.

JFE Holdings' Audit & Supervisory Board has three independent Outside Audit & Supervisory Board Members and two full-time Inside Audit & Supervisory Board Members. The full-time Audit & Supervisory Board Members are also absentee Audit & Supervisory Board Members of each operating company. In addition, multiple full-time Audit & Supervisory Board Members are assigned to the operating companies, and Audit & Supervisory Board Members serve as absentee Audit & Supervisory Board Members in companies under the operating companies.

Furthermore, full-time Audit & Supervisory Board Members are assigned, or part-time Audit & Supervisory Board Members are dispatched, from each operating company to Group companies. Each

part-time Audit & Supervisory Board Member is appointed as an absentee Audit & Supervisory Board Member of one of the four Group companies to enhance Group governance.

The JFE Group Board of Auditors, which consists of full-time and part-time Audit & Supervisory Board Members of the operating companies and each Group company, considers internal-control issues of each company, with the JFE Holdings' Audit & Supervisory Board playing a central role. Audit & Supervisory Board Members enhance their auditing activities by conducting research and study in JFE Group Board of Auditors subcommittees.

JFE Holdings believes that this is the most effective system for creating an "audit tree" to enable robust and wide-ranging Group risk management.

See page 81 for more details about the internal control system.

Furthermore, JFE Holdings has voluntarily established Nomination and Remuneration committees as advisory bodies to the Board of Directors. The majorities of both committees are composed of and chaired by independent outside executives to ensure fairness, objectivity and transparency regarding the appointment and remuneration of Directors and other officers.

The Nomination Committee deliberates matters such as basic policy regarding the election and dismissal of the President, successor planning, and the nomination of candidates for outside executives. The Remuneration Committee deliberates on matters such as basic policy regarding remuneration of Directors of JFE Holdings and each operating company. Both committees report to the Board of Directors.

As such, JFE Holdings has created a hybrid governance system that integrates the superior aspects of a Nomination Committee, etc. into the existing Audit & Supervisory Board. Under this system, JFE Holdings is working to increase the effectiveness of its management oversight and deepen discussions regarding sustainable growth and improved medium- to long-term corporate value.

See page 77 for more details on corporate governance.

Feature

03

### Outside Executives Group Interview

## Outside executives share perspectives on the features and effectiveness of JFE's governance system

JFE Holdings' Audit & Supervisory Board voluntarily established Nomination and Remuneration committees as advisory bodies to the Board of Directors. The President has explained the reasons behind selecting this type of system for discussing issues in committees. A roundtable discussion involving all six outside executives was held to elicit their opinions regarding the effectiveness of JFE Holdings' governance system.

A

### Shigeo Ohyagi

Teijin Limited  
Senior Advisor

Mr. Ohyagi joined Teijin Limited in 1971. He was appointed to his present post in June 2018, after serving as Representative Director, President, and Chairman of the Board of Teijin. He is also an Outside Director of KDDI Corporation and MUFG Bank, Ltd. He became an Audit & Supervisory Board Member of JFE Holdings in June 2014.

B

### Tsuyoshi Numagami

Board Member and  
Executive Vice President of  
Hitotsubashi University

Mr. Numagami was appointed Professor of the Graduate School of Commerce and Management of Hitotsubashi University in 2000. He took his present position in 2014 after becoming the Dean of the school in 2011. He was also appointed Professor of the Graduate School of Business Administration in 2018. He became an Audit & Supervisory Board Member of JFE Holdings in June 2018.

C

### Masao Yoshida

Furukawa Electric Co., Ltd.  
Special Advisor

Mr. Yoshida joined Furukawa Electric Co., Ltd. in 1972. He was appointed to his current post in July 2018 after serving as President and Representative Director and then Chairman and Representative Director. He is also an External Director of Tokyo Century Corporation. He became a Director of JFE Holdings in June 2015.

D

### Isao Saiki

Abe, Ikubo & Katayama  
Law Firm  
Partner Lawyer

Mr. Saiki was admitted to the bar in 1989 and joined Ginza Law Office (now Abe, Ikubo & Katayama Law Firm). He has held his current post since January 1998. He became an Audit & Supervisory Board Member of JFE Holdings in June 2017.

E

### Nobumasa Kemori

Sumitomo Metal Mining  
Co., Ltd.  
Executive Advisor

Mr. Kemori joined Sumitomo Metal Mining Co., Ltd. in 1980. He was appointed to his current post in June 2017 after serving as Representative Director and President and then Representative Director and Chairman of the Board. He is also as an Outside Director of Nagase & Co., Ltd. and Sumitomo Realty & Development Co., Ltd. He became a Director of JFE Holdings in June 2018.

F

### Masami Yamamoto

Fujitsu Limited  
Director  
Senior Advisor

Mr. Yamamoto joined Fujitsu Limited in 1976. He was appointed to his current post in June 2019 after serving as President and Representative Director and then Chairman and Representative Director. He is also a Member of the Board of Directors (Outside Director) of Mizuho Financial Group, Inc. He became a Director of JFE Holdings in June 2017.

## Outside executives share perspectives on features and effectiveness of JFE governance system

### First, how did you feel working as an outside executive for the past year?

**Kemori** One year has passed since I was appointed as a Director in June 2018. JFE Holding is a company with an Audit & Supervisory Board, the standard corporate structure in Japan, but I was very interested in how the company's governance functions effectively within this framework.

At my first Board of Directors meeting, I felt that the Outside Audit & Supervisory Board Members and Outside Directors worked together magnificently, with the Audit & Supervisory Board Members speaking freely, no differently than Directors.

The current Board of Directors consists of five Inside Directors and three Outside Directors joined by an additional three Outside Audit & Supervisory Board Members. Inside members are outnumbered six to five by outside members, which improves auditing and oversight functions dramatically. We have very useful discussions about what goes into making decisions and execution status reports after decisions are made, so I think the entire company is heading in a good direction. The chairperson of the Board of Directors (President) is open-minded and takes time to listen, asking people to please speak up if there are any more opinions, even after outside executives have said whatever they want to say. I think this is one of the reasons why discussions are lively.



**Numagami** I also just finished my first year. I was deeply impressed by the fact that such diverse and highly specialized outside executives active in their own respective fields were having open discussions and frankly saying what they honestly thought. I am a business scholar who specializes in organizational theory and strategic theory. In organizational theory, it is said that problems such as shared information

bias<sup>1</sup> and groupthink<sup>2</sup> can easily arise when making decisions as a group. However, because JFE Holdings' outside executives are very frank and raise issues for discussion from various angles, I think such problems in decision making are unlikely to arise here. Also, I believe group discussions should not be just superficial verbal exchanges. Taking what is said as a clue, we should converse with people while considering the thoughts behind their words, their viewpoints and the framework of each discussion. However, when diverse people gather, it is extremely difficult to fully understand their diverse viewpoints, so I always have a hard time holding discussions in the classroom. However, partly because the chairperson of JFE Holdings' Board of Directors is highly capable as an interpreter, the diverse viewpoints are integrated effectively. I think it's magnificent that a place has been established where such dialogue with each other is possible.

<sup>\*1</sup> The tendency of a group to spend much time discussing shared information but not much time discussing unshared information, meaning that even if people with diverse information come together, the information they possess will not necessarily be utilized fully

<sup>\*2</sup> The situation where a group accepts irrational decision making by prioritizing fast consensus- forming rather than reaching the best conclusion, meaning that some individuals avoid expressing opposing viewpoints

**Yoshida** As Mr. Kemori said, it's like there are six Outside Directors. Since I became a Director in 2015, Outside Directors have changed the most. Two Directors with engineering backgrounds have joined us—Mr. Yamamoto is highly knowledgeable about IoT and AI, and Mr. Kemori is extremely familiar with on-site issues from melting and casting to rolling. Mr. Kemori also points out issues with sharp insight that I can't, no matter how much I visit a site. Mr. Saiki, a legal expert, and Mr. Numagami, a business scholar, have become Audit & Supervisory Board Members. I think the Board has a very good makeup because we can discuss issues from diverse perspectives.

### What impresses you the most when you visit JFE sites?

**Numagami** I've been shown many sites, including JFE Steel's Kurashiki, Chiba and Keihin sites and JFE Engineering's Global Remote Center, incinerator site and the multilevel crossing construction site at Maihama. I believe it's important to visualize the situation in the field to have a logical discussion at the Board of Directors meeting, so there is a big difference between seeing or not seeing a site. In addition, discussions at JFE Holdings' Board of Directors tend to go

back and forth between what's happening in the field and in global competition, debating on both issues at the same time. But if you haven't seen a site and only understand the global side, the meeting may deteriorate into a dog fight. I am very grateful that after visiting various sites I am able to understand our dynamic discussions more deeply.

**Kemori** I specialize in metallurgical technology, so I have inspected mainly sites with blast furnaces, such as in Vietnam and Keihin, Kurashiki and Fukuyama in Japan. FHS in Vietnam is basically operated by a Taiwanese company, so the number of employees dispatched there from JFE is limited. However, I could see that they relied on JFE, particularly for the rolling process, and that this was leading to future growth.

In Japan, I saw how the executives from headquarters who accompanied me to sites interacted with local executives and employees in the field during plant tours and social gatherings later. I truly feel that JFE is a manufacturing company led by its plants in the field. There is no wall between executives and people working in the field, and it's a company with extremely good and open communication. Also, such field trips give me opportunities to contact people in the field, making me feel like part of the family. This gives me a strong sense of affinity with and membership in JFE, which motivates me to do my best for the company.

### Next, please talk about the role of the Audit & Supervisory Board.

**Saiki** Auditing from a legal standpoint is a core function of Audit & Supervisory Board Members. A company's Audit & Supervisory Board Members must have long terms of office to carry out accurate legal audits. However, there is also the opinion that this alone would be a waste of auditor resources. My first impression is that JFE Holdings has given a lot of thought to this, and has created an environment where Audit & Supervisory Board Members can play active roles, sometimes even like Outside Directors. Compared to other companies, there is much more information available to JFE Audit & Supervisory Board Members and there are more opportunities to speak up.

In the case of the Audit and Supervisory Committee, Nomination Committee, etc., audits are carried out by Directors who have voting rights. This is significant. However, since their terms of office are short, their ability to conduct audits with a long-term view is also an issue. In this respect, an Audit

& Supervisory Board makes it easier to steadily carry out audits with a long-term view. It's important to maximize the advantages of both systems. However, how those in charge of auditing are allowed to exercise their roles depends entirely on management's stance. I don't think the issue is simply if a company has an Audit & Supervisory Board or not.

**Ohyagi** The basic thinking behind why JFE Holdings chose to have an Audit & Supervisory Board has remained consistent since I took office. JFE Holdings is a huge corporate organization with numerous subsidiaries, and since most of them have manufacturing sites, we have to look at both corporate management and on-site operations.

Therefore, the company has secured a system in which specialists monitor a wide variety of conditions, which is why the company chose to have an Audit & Supervisory Board. Realistically, it's difficult for people from outside the company to learn about a field and carry out oversight and audits in a short two-year term of office, as in a company with an Audit & Supervisory Committee.

Also, there aren't other companies where Audit & Supervisory Board Members express their opinions like we do. It may not even be allowed at other companies. JFE Holdings practices not only defensive governance with legal audits, as Mr. Saiki mentioned earlier, but also active governance with the full participation of Audit & Supervisory Board Members. JFE Holdings has created a unique culture in its Board of Directors, allowing Outside Audit & Supervisory Board Members to express themselves fully as outside executives, just like Outside Directors, in discussions prior Board of Directors resolutions. We essentially serve the same functions as Directors, even though we don't legally have voting rights. This is not easy to achieve.





## Outside executives share perspectives on features and effectiveness of JFE governance system

**Yoshida** I have not met any other Audit & Supervisory Board Members who talk about the ideal situation for their companies, so we Directors find your comments very helpful.

**Yamamoto** A Board of Directors meeting is clearly livelier in a company where Audit & Supervisory Board Members can speak up often. That may be the main driving force for revitalizing Board of Directors meetings.

**Yoshida** That's right.

**Saiki** Regarding Audit & Supervisory Board Member activities, outside executives hold meetings several days before Board of Directors meetings, and the Audit & Supervisory Board meeting. To be honest, I have the impression that there is a heavy burden on Audit & Supervisory Board Members at this company. We also participate in meetings where Audit & Supervisory Board Members of the Group get together for discussions to help us understand how we are positioned within the context of Group-wide auditing. Additionally, JFE Holdings' full-time Audit & Supervisory Board Members sometimes check the status of Group company audits in great detail.

There are also opportunities to feed information back to Outside Members at Audit & Supervisory Board meetings. Audits are carried out relatively efficiently even though there are many Group companies. This has enabled me to hear about issues that Audit & Supervisory Board Members of Group companies deal with in their audits.



**Numagami** JFE Holdings has a system called an audit tree for sharing all audit information, including that of sub-subsidiary companies, which eventually reaches JFE Holdings' Audit

& Supervisory Board. I think that a major characteristic of JFE Holdings is that Audit & Supervisory Board Members can use that information when speaking at meetings.

**Ohyagi** The Group-level activities of JFE Holdings Audit & Supervisory Board Members are probably rare among listed companies. The 40 to 50 members of each company are divided into five groups. Each group decides key themes for the year and then carries out research. They report on their activities and help to elevate the efforts of each other. For example, one theme is to discuss what our company can learn from incidents that have occurred at other companies. I'm impressed by the fact that we have the power to take Audit & Supervisory Board Member activities to a higher level by repeating such efforts earnestly each year.

**I would like to ask about the Nomination and Remuneration committees that have been established voluntarily. In April of this year, the President was replaced. How was the Nomination Committee involved?**

**Yamamoto** This was the first election of a President since the Nomination and Remuneration committees were established as advisory bodies to the Board of Directors in October 2015, so it was a test if the autonomous election process by the Nomination Committee works properly.

To get straight to the point, I think it functioned smoothly and exhibited a high level of performance. After hearing of former President Hayashida's intention to retire, multiple meetings of the Nomination Committee were held, and issues such as rules for election and dismissal of the President, successor planning and election of Inside and Outside Directors were repeatedly discussed. As a result, the process of selecting the next President went smoothly. I felt that the change of President was necessary and appropriate for the continuity and growth of JFE Holdings, and other Directors and Audit & Supervisory Board Members probably felt the same way, which reflected our capacity to find suitable successors by remaining aware of the process in our daily activities.

Also, at the same time, some parts of the process have been revised, and I expect that it will be further improved when we go through the next election and dismissal process. For example, a process has been created in which the President will propose a successor plan to the Nomination Committee every year, based on which discussions will be

held by the committee. The Nomination Committee will draw up a plan for selecting a successor to the President based on these discussions and report it to the Board of Directors. This means that the President must always be aware of his successor. Now that a mechanism has been put in place where selection of a successor does not arise suddenly but proceeds according to a plan, in the future the Nomination Committee will have to check if the system works well, including the development of potential successors.

Since JFE Holdings has various opportunities to communicate with Corporate Officers at operating companies, including reporting to the Board of Directors, the Nomination Committee would like to take advantage of these opportunities to constantly check the suitability of successors and the way they think.

**Last year, we introduced and launched a medium- to long-term performance-linked remuneration system. What's your assessment?**

**Kemori** Considering the criticism that fixed remunerations to executives in Japan are relatively high and not linked closely to business performance, and the opinion that systems which overemphasize short-term profits are not suitable in Japan, we have adopted a remuneration system that evaluates medium- to long-term performance and feeds that evaluation back into remuneration. Also, I think the current system is based on the idea that by introducing stock compensation, the executives' intent to raise stock prices and corporate value from the shareholders' perspective will manifest itself in action. I regard our remuneration system as an improvement on problems with the Japanese remuneration system. As for the future, I think it will be necessary to check whether this remuneration system is truly appropriate from three points of view. The first is whether the system really remunerates executives for performance versus the economic environment when it changes significantly later in terms of indicators that influence remuneration. The second is how the positioning of sales and profits relate within the industry. The last is if significant gaps appear in comparison with the remuneration of typical employees. If it seems the system should be revised after looking at these issues, then I think we should be flexible and make the needed changes at that time. I would also like to confirm if this revision of executive remuneration is functioning as an incentive for executives.

**Saiki** I think it's appropriate in the view of shareholders because remuneration is linked to performance. However, since the Medium-term Business Plan is used as a benchmark, it may not necessarily be an incentive for executives if the business environment changes drastically and initial assumptions are changed. With everyone devoted to working with a sense of mission, I think at some point it will become necessary to review either the remuneration system or the benchmarks to provide appropriate incentives.

**Yamamoto** Members of JFE Holdings management are all very diligent and create medium-term business plans with high goals. This makes it possible for target-achievement rates to be low, which wouldn't be an incentive for executives. So it's not an appropriate incentive, which is a problem.



**Ohyagi** JFE Holdings is an industry leader, so we should target appropriate levels of remuneration that top executives of a leading business can take pride in. However, enormous capital investment must come first in the steel industry, so there is a high level of fixed costs. Also, business results fluctuate significantly depending on changes in environmental conditions such as raw materials and energy, so sometimes results do not appear in the short term. If the variable part of results is proportionally large, the level of remuneration will only reflect the fixed part whenever the environment worsens, resulting in a remuneration system in which the incentive does not work. I think devising a system to counter this is very difficult. In the service industry, for example, it is possible to set a three-year goal and pay the incentive only if the goal is achieved. But this is not so easy for a company making large capital investments. Given these conditions, we have to settle with the idea of having a certain industry standard for the fixed

## Outside executives share perspectives on features and effectiveness of JFE governance system

portion of remuneration, and then adding an appropriate variable portion. That being said, we definitely want executives to overcome economic fluctuations and do their best to earn a level of remuneration that leads the industry. I would like to see a system with incentives that earnestly reflect these objectives.

### What discussions are being held at the Board of Directors meeting regarding the Sixth Medium-term Business Plan that is currently underway?

**Yoshida** It has been a little over a year since the current Medium-term Business Plan began, but I feel that a tremendous amount of change has occurred during that time. The assumptions of the plan have changed significantly, given that U.S.-China trade friction, soaring raw material prices, rising logistics and construction costs due to shortages of labor, tariffs and fluctuations in exchange rates and interest rates all have become a reality and are no longer just future threats. In the midst of this, how do the results of our activities differ from the changing external environment? For example, how does the amount of capital investment differ from initial assumptions and what kind of trouble is there with equipment? I think the time has come to distance ourselves a little from our perspective when the Medium-term Business Plan was formulated to allow us to check if any points need to be corrected. Depending on the situation, we may need to discuss revising the plan at the Board of Directors meeting. Since investment effects take a long time to appear at JFE Holdings, I think that we might have to change things slightly, including the remuneration system we just talked about.



**Numagami** I completely agree. When I have students formulate a strategic plan at the university, I teach them to forecast conditions as best they can and create their plan based on that, because it is not possible to foresee all changes in the environment; changes always occur. People become oblivious to change if they don't have a plan, because without a plan they can't check to see if their original outlook was incorrect. However, I also instruct students not to blindly adhere to a plan. There are always things that can't be predicted. So, rather than just sticking to a plan, we need to check it again and again, including the assumptions made at the time it was formulated, and rethink those parts that should be reconsidered.

**Yamamoto** It's the same for global expansion, which is a significant issue in the Medium-term Business Plan. In working with various companies for global expansion, if the environment changes then our relationships with these partner companies will also change. Adaptation is a very important theme, so we must emphasize continuous adaptation.

**Ohyagi** I used to think that a medium- to long-term plan determines the direction a company must take over the next five to ten years, and what needs to be done to achieve that. However, in my experience, the capital market really requires us to correct discrepancies in short-term performance against our plans. I have found it necessary to convey the message that we will revise any plan when it needs to be revised to meet market conditions.

**Kemori** I think we need to set a profit goal, but in situations where the market changes significantly or costs increase unexpectedly, ensuring a certain level of production capacity, for example, is also important over the medium- to long-term. At the company I come from, we forge medium- to long-term plans to increase production capacity by tens of thousands of tons per year through the acquisition of mining interests. Based on this, our three-year plan forecasts profits if prices stay at a certain level. However, not much thought has been given to valuating medium- to long-term results based on the absolute amount of profit. It might be better to rethink the idea of evaluating performance only in terms of profit goals.

**Yoshida** In the case of the steel industry, there is also the issue of changes in the proportion of production systems between blast furnaces and electric furnaces, or developed countries and emerging countries. After all, we have to be conscious of profits as an indicator for performance-based

evaluations, but maybe we need to combine it with other factors too.

**Ohyagi** How to update the business portfolio is a theme that all managers constantly consider. Even so, it cannot be changed so easily in the steel industry, where there are huge steelworks on vast sites with running railways inside. How do we survive in such a situation?

**Yoshida** Should we transfer the downstream part of production overseas as with steel sheets for automobiles, or should we change the proportions to a certain extent by moving upstream parts of production as well? It's the same in the industry I come from, and I think this discussion will come up constantly.

### Handling ESG initiatives is one of the core strategies in the Medium-term Business Plan, but what kind of opinions are you expressing at Board of Directors meetings?

**Yoshida** Because JFE Holdings uses a lot of coke in its blast furnaces, how to make iron with less carbon at a lower cost is a social mission. I think we can make a significant contribution to society if we can do this. I said the same thing last year, but I would like to see the company essentially change the way steel is made by taking the global lead in research and development of a manufacturing process that does not use coke. Then, I think we should aim for a balance between profits and the environment by providing our energy-saving and carbon-saving technologies to the world, for which we would receive a certain level of compensation in return. I received a report about it at a Board of Directors meeting. I think we are aggressively tackling the environmental issue as a leading company, mindful that we can help prevent global warming and reduce its impact on climate change.

**Numagami** As Mr. Yoshida says, there are many companies that just focus on making steel cheaply, but I don't think there are many companies committed to high-level research and development in regard to steel. As a leader in the global steel industry, we have the potential to contribute significantly to society, so research and development is very important.

How much to invest in research and development is a difficult question, but it may be necessary to set it as a key performance indicator, including what kind of results should be generated.



**Ohyagi** Regarding governance, the structure of the Board of Directors has changed considerably to match the changing times. Five years ago, when I was appointed, there were five members: three Inside Directors and two Outside Directors. Later, to further stimulate and deepen discussions, we added the Presidents of JFE Engineering and JFE Shoji Trade as Inside Directors, and also increased the number of Outside Directors. In addition, we established the voluntary Nomination and Remuneration committees, which are both chaired by outside executives. In recent years, governance at Japanese corporations has changed considerably, but JFE Holdings has changed at an even faster rate over the past five years. Inherently, JFE Holdings is extremely straightforward and serious in terms of employees and corporate character. It feels like once it starts to change it can change at an increasingly faster pace.

### Lastly, what do you want to focus on as outside executives to increase JFE's corporate value and achieve sustainable growth?

**Yamamoto** Regarding the value of steel, I think steel continues to be the basis of global industries. In that sense, JFE Holdings has high potential and many opportunities to play an active role in the world, so I think the most important thing is how to be aggressive while also minding the portfolio. I would definitely like to help JFE Holdings become a company where ESG issues are also handled firmly and positively rather than defensively.

**Yoshida** As Mr. Yamamoto said, steel is very useful as a construction material; few materials can surpass it. When we



## Outside executives share perspectives on features and effectiveness of JFE governance system

think about a system to generate profits while consumption factors continue to change and expand, we must always take the perspectives of comparative advantage and optimization, considering not only how to advance our technology but also what are the most suitable technologies and places for production from a medium- to long-term viewpoint.

**Numagami** I have long studied organizations where employees in general become exhausted, particularly middle managers who must deal with the excessively heavy burden of constant adjustment. I would like to contribute by identifying such organizational issues one by one, aiming to allow our excellent middle managers to spend more energy on external competition rather than internal issues.

**Saiki** While people familiar with the industry know all too well that steel is a line of business greatly affected by changes in the economic environment, despite being a heavy industry, the general public is not aware of this. Based on my belief that

management should always communicate messages that are understandable to all of society, including general investors and consumers, not just experts, I'd like to contribute to higher accountability and increased corporate value by continuing to ask core questions.

**Ohyagi** A big company needs to keep changing to remain active even after 20 or 30 years. As an industry leader, JFE Holdings must continue to change. The question is how to develop people who can carry this out from an early stage and then continue to change. I also believe that in thinking 20 or 30 years ahead, we need to start promoting diversity more actively, because later it will be too late. We must deal effectively with human resource development and diversity so that we don't lose our position as an industry leader.

**Kemori** My theory is that in heavy industry, you cannot improve corporate value without improving safety records. The fact that accidents have occurred means the established

standard operating procedures (SOPs) are not being followed. This is also related to pursuing quality and increasing productivity. Prioritizing safety over everything is ultimately related to corporate value to a significant degree. From that point of view, I would like to continue expressing my frank opinions.

I experienced a very difficult crisis-management situation in an overseas project that I worked on as President of a company. The valuable lesson I learned from that experience is

that even in the worst situations, the top global executives never cry about a situation no matter how difficult it may be, and instead persist in searching for a resolution. If you are going to do business overseas, you must be prepared and determined to face any situation. This is important for JFE Holdings, which is expanding globally. I would like to offer such advice based on my experiences.

### Message from New Executive



## Overcoming preconceptions is the key to governance and value creation

Audit & Supervisory Board Member (full-time)

**Kumiko Baba**

I joined Toshiba Corporation after the Equal Employment Opportunity Act came into effect. At the time, I was involved in international business including advanced computer equipment. I was always required to be fair and logical in difficult contract negotiations as I interacted with many partners, including ICT companies mainly in the United States. In a field with fast product and business model cycles, I experienced the excitement and tension of doing business at a company with a leading global share, striving to make suitable changes in a timely manner. Later, I joined JFE in April 2014.

It is said that promoting diversity involves incorporating female perspectives. Although there were times during my business career of over 30 years when my abilities as a professional were questioned, at no time has gender actually made any difference in terms of results. Recently, the utilization of women is sometimes expressed as a corporate obligation, but essentially my perception is that we have finally been freed from old values and preconceived concepts, and that the time has come when we can rationally utilize human resources

without being preoccupied with age, gender, origin, or other attributes. I have experienced the difficulty of balancing work with family life, including raising children, but it does not conflict with my value as a professional. The issue of division of roles by gender is also entering a new stage worldwide.

I expect this trend will continue to promote the creation of value for companies, individuals and society. I believe that rational and fair thinking ensures transparency, and is directly linked to a governance system that openly provides accurate and fair explanations.

JFE delivers products and services essential to society, such as steel and engineering. It has a good culture that is highly motivated, open-minded and values substance over form. However, it is true that many large Japanese corporations communicate with in-house jargon and rely on tacit understanding lacking economic rationality. I would like to fulfill my professional duties as an Audit & Supervisory Board Member by contributing to a culture of thorough and honest discussions based on respect for data and objective arguments.





Corporate Governance

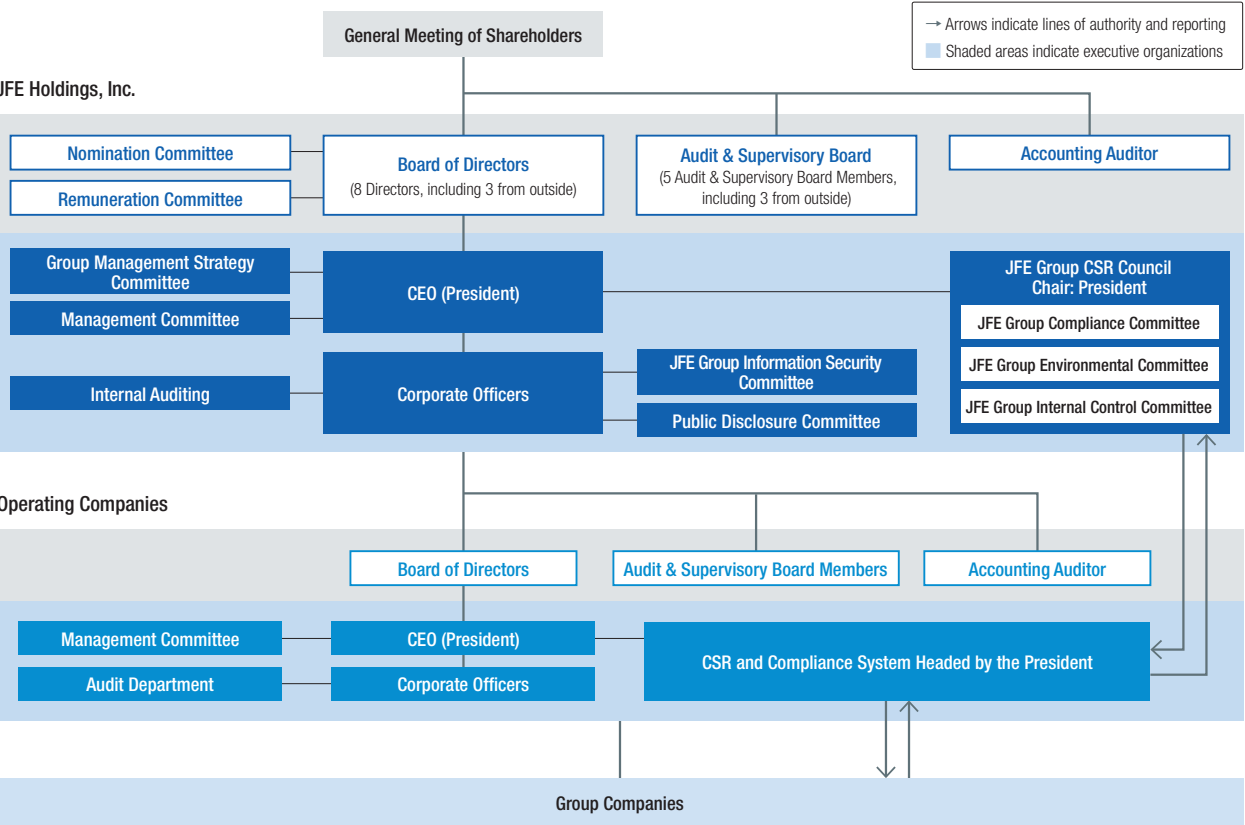


Basic Stance

With the steel business, engineering business and trading business at its core, the JFE Group develops a broad range of businesses in a wide range of areas together with many group companies and partners. Establishing a proper governance system is essential towards improving independence and raising efficiency in each operating company, along with the optimal management of risks, which include those related to the environment, safety and disaster prevention in the Group. It is also necessary for the sustainable growth of the Group and the medium- to long-term improvement of its corporate value.

See page 68 for the current stance on the company's governance system.

Corporate Governance System



Establishment of Basic Stance on Corporate Governance

The JFE Holdings, Inc. Basic Stance on Corporate Governance was established in October 2015 to strengthen efforts to achieve sustainable growth and increased corporate value over the medium to long term. Please review the Corporate Governance Report for more information.



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

Overview of the corporate governance system

Group governance system

The JFE Group comprises a holding company and three operating companies JFE Steel, JFE Engineering and JFE Shoji Trade.

JFE Holdings, a pure holding company at the core of the Group's integrated governance system, guides Group-wide strategy, risk management and public accountability.

Each operating company has developed its own system suited to its respective industry, ensuring the best course of action for competitiveness and profitability.

Overview of the corporate governance system

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

Major topics discussed at the FY2018 Board of Directors meeting

- Revision of the Basic Stance on Corporate Governance (Complying with the Revised Corporate Governance Code)
- Introduction of medium- to long-term performance-linked remuneration
- Follow-up for investment and lending and capital investment for each operating company

Governance system

JFE Holdings and each operating company have their respective Audit & Supervisory Board Members. The companies are crosschecked by the Directors, who supervise operational execution, and the Audit & Supervisory Board Members, who conduct audits. Also, a Corporate Officer system separates decision making and execution to clarify authority and responsibility, as well as to accelerate execution. JFE Holdings' Board of Directors is responsible for maintaining and enhancing management efficiency and passing resolutions as legally required, laying down key management policies and strategies and supervising operational execution. The Audit & Supervisory Board oversees management for the purpose of strengthening its soundness.

Major initiatives to strengthen the governance system

September 2002

Established JFE Holdings

June 2007

Added two outside directors and shortened the term of directors from two years to one year

October 2015

Established JFE Holdings, Inc. Basic Stance on Corporate Governance, Nomination Committee, and Remuneration Committee

FY2015

Initiated analysis and evaluation of board of directors' effectiveness

June 2017

Reorganized the Board of Directors and the Audit & Supervisory Board based on results of their effectiveness analysis and evaluation  
● Added the presidents of JFE Engineering and JFE Shoji Trade to the Board of Directors, along with an increase of two outside members (Director and Audit & Supervisory Board Member)

Independent Outside Directors

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

Independent Outside Audit & Supervisory Board Members

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



Standards for Independence of Outside Directors/Audit & Supervisory Board Members of JFE Holdings, Inc.  
<https://www.jfe-holdings.co.jp/en/company/info/pdf/independence.pdf>

JFE Holdings Outside Directors and Outside Audit & Supervisory Board Members (as of July 1, 2019)

Position	Name	Major Concurrent Positions	Independent Executive	FY2018 Board of Directors Attendees	FY2018 Audit & Supervisory Board Attendees
Outside Director	Masao Yoshida	Special Advisor of Furukawa Electric Co., Ltd. External Director of Tokyo Century Corporation	✓	12 out of 12 times (100%)	—
Outside Director	Masami Yamamoto	Director and Senior Advisor of Fujitsu Limited Outside Director of Mizuho Financial Group, Inc.	✓	12 out of 12 times (100%)	—
Outside Director	Nobumasa Kemori	Executive Advisor of Sumitomo Metal Mining Co., Ltd. Outside Director of NAGASE & CO., LTD. Outside Director of Sumitomo Realty & Development Co., Ltd.	✓	9 out of 9 times (100%) <sup>*1</sup>	—
Outside Audit & Supervisory Board Member	Shigeo Ohyagi	Senior Advisor of Teijin Limited Outside Director of KDDI Corporation Outside Director of MUFG Bank, Ltd.	✓	12 out of 12 times (100%)	18 out of 19 times (95%)
Outside Audit & Supervisory Board Member	Isao Saiki	Partner Lawyer of Abe, Ikubo & Katayama Law Firm	✓	12 out of 12 times (100%)	19 out of 19 times (100%)
Outside Audit & Supervisory Board Member	Tsuyoshi Numagami	Board Member and Executive Vice President of HITOTSUBASHI UNIVERSITY	✓	9 out of 9 times (100%) <sup>*2</sup>	13 out of 13 times (100%) <sup>*2</sup>

<sup>\*1</sup> Newly elected as a Director in the previous year's Ordinary General Meeting of Shareholders (held on June 21, 2018); therefore, the number of meetings of the Board of Directors differs.  
<sup>\*2</sup> Newly elected as an Audit & Supervisory Board Member in the previous year's Ordinary General Meeting of Shareholders (held on June 21, 2018); therefore, the number of meetings of the Board of Directors and the Audit & Supervisory Board differs.

Approach to diversity in the Board of Directors

With regard to the composition of the Board of Directors, the company elects Officers following deliberations by the Nomination Committee, by focusing on the enhancement of diversity of the Board members, such as their expertise, knowledge and experience in various fields, while balancing with the appropriate size of the Board. One female Audit & Supervisory Board Member was appointed in June 2019, and the company is working to enhance gender and global diversity mainly by electing Directors and Audit & Supervisory Board Members who possess a wealth of knowledge and experience as management in global enterprises. The company will continue to systematically engage in initiatives to foster such human resources suitable for candidates for Directors and Audit & Supervisory Board Members by setting specific targets.

Nomination Committee and Remuneration Committee

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

Nomination Committee and Remuneration Committee structure (as of July 1, 2019)

Committee	Inside Director	Outside Director	Outside Audit & Supervisory Board Member	Chair
Nomination Committee	2	2	2	Masami Yamamoto Outside Director
Remuneration Committee	2	2	2	Nobumasa Kemori Outside Director

The Nomination Committee deliberates and reports to the Board of Directors on matters pertaining to the basic stance on the election and dismissal of the President of the company, proposals for the election of candidates for the President of the company, succession plans of the President of the company, and the nomination of candidates for Outside Directors and Outside Audit & Supervisory Board Members. Six meetings were held in FY2018. The Remuneration Committee deliberates matters pertaining to the basic stance on the remuneration of Directors, etc. of the company and each operating company and reports to the Board of Directors. Three meetings were held in FY2018.

Support for Directors and Audit & Supervisory Board Members

Directors and Audit & Supervisory Board Members are provided with opportunities and funding to receive training in legal matters, corporate governance, risk management and other subjects that help them fulfill their roles and duties. In addition, a briefing is held for Outside Directors and Outside Audit & Supervisory Board Members prior to Board of Directors meetings. Furthermore, Outside Directors and Outside Audit & Supervisory Board Members are provided with relevant information and opportunities to exchange opinions with the president and other top managers, attend key hearings on the operational status of individual departments, and inspect business sites and Group companies inside and outside Japan.

Analysis and evaluation of effectiveness

Since FY2015, JFE Holdings has worked to improve the overall effectiveness of its Board of Directors by analyzing and evaluating it every year.

In FY2018, third-party questionnaires were sent to all Directors and Audit & Supervisory Board Members. Based on the discussions by the Board of Directors in light of the survey results and evaluation by the third-party organization, the Board of Directors determined that its overall effectiveness has been ensured through invigorated discussions primarily by the Outside Directors/Audit & Supervisory Board Members, mainly by conducting a preliminary briefing session where all Outside Directors/Audit & Supervisory Board Members attended and by appropriate direction by the chairperson. In addition, the appointment of a female Audit & Supervisory Board Member in June 2019 has helped further diversify the composition of Directors and Audit & Supervisory Board Members, thereby enabling more fruitful discussions. Furthermore, in addition to accurate and fair audits performed by the Audit & Supervisory Board Members, the members also express opinions and actively ask questions at Board of Directors meetings to further invigorate deliberations. Such outcomes support the conclusion that JFE functions more efficiently as a company with an Audit & Supervisory Board.

Meanwhile, we are implementing measures to further improve the effectiveness of the Board of Directors, including by enhancing discussions, such as on ESG issues essential for sustainable growth.

Operating system

Key decision making

JFE companies are responsible for business decisions in accordance with their respective rules and procedures, whereas JFE Holdings makes decisions about Group-wide matters. Each operating company determines key matters through a deliberative process by its own Management Committee and Board of Directors. In April 2017, JFE Holdings changed the operating structure of key committees. Management strategies involving the entire group are now deliberated by the Group Management Strategy Committee and core issues of JFE holdings, the operating companies and the Group are deliberated by the Management Committee before they are submitted to the Board of Directors for resolution.

Structure of Group Management Strategy Committee and Management Committee

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

Executive remuneration

Executive remuneration is based on the basic policies founded on discussions and reports by the Remuneration Committee, and it is decided through either a resolution of the Board of Directors or deliberations by the Audit & Supervisory Board Members, for an amount within the total limit approved at the General Meeting of Shareholders.

Executive remuneration (FY2018)

Position	Total Remuneration, etc. (thousand yen)	Number of Executives
Directors (excluding Outside Directors)	297,832	5
Audit & Supervisory Board Members (excluding Outside Audit & Supervisory Board Members)	78,334	2
Outside Directors/ Audit & Supervisory Board Members	73,847	8

Officers whose consolidated remuneration exceeded 100 million yen (FY2018)

Name	Position	Company	Per Company (thousand yen)	Total (thousand yen)
Eiji Hayashida	Director	JFE Holdings	173,925	173,925
Koji Kakigi	Director	JFE Holdings	12,000	175,545
	Director	JFE Steel	163,545	
Hajime Oshita	Director	JFE Holdings	8,400	101,585
	Director	JFE Engineering	93,185	

Basic Stance on determination of remuneration for Directors and Audit & Supervisory Board Members and Corporate Officers

- The Board of Directors shall determine remuneration system for Directors and Corporate Officers based on deliberations regarding its appropriateness by the Remuneration Committee to ensure fairness, objectiveness and transparency.
- The remuneration level for Directors and Corporate Officers shall be determined to secure excellent human resources who are able to put the Group's corporate vision into practice, taking into consideration the business environment of the Group and remuneration levels at other companies in the same industry or of the same scale.
- The ratio between basic remuneration and performance-linked remuneration (annual bonus and stock remuneration) shall be properly established according to the roles and responsibilities, etc. of each Director and Corporate Officer so as to function as sound incentives toward the sustainable growth of the Group.

The company pays only basic remuneration to Outside Directors and Audit & Supervisory Board Members, given their respective roles of supervising and auditing management from an independent and objective standpoint.



Composition of remuneration for Directors and Audit & Supervisory Board Members and Corporate Officers

Medium- to long-term performance-linked remuneration system for Directors and Audit & Supervisory Board Members has been introduced from FY2018. Remuneration for Directors and Audit & Supervisory Board Members after the introduction of this system is as follows.

Basic remuneration

A fixed amount is paid every month according to positions and other factors.

Annual bonus

Directors and Corporate Officers, excluding Outside Directors, receive cash bonuses once a year, based on a standard determined according to single-year consolidated results. From FY2018 to FY2020, the “total amount of segment profit” will be used as a performance indicator.

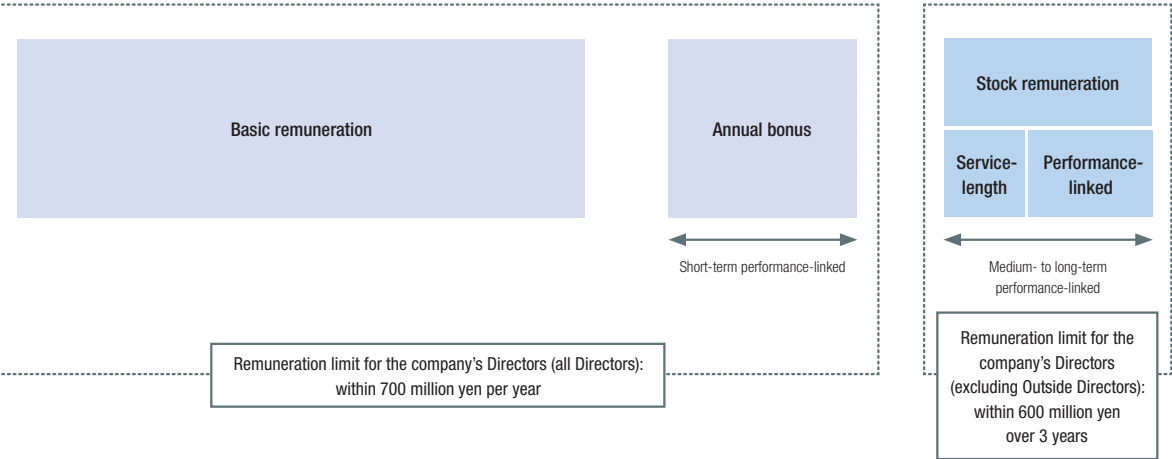
Medium- to long-term performance-linked remuneration

The stock remuneration plan is a plan that provides the company’s shares and an amount of cash equivalent to the market price of the company’s shares to Directors (excluding Outside Directors) and Corporate Officers. Remuneration based on this system is paid based on the payment level, which is determined in accordance with the performance targets, etc. in the Group’s medium-term business plan, and as a rule, it is provided at retirement through a trust in the form of the company’s shares or cash.

In FY2019, the payment level is determined according to the level of achievement of the target profit attributable to owners of the parent company of 200 billion yen per year, set under the Sixth Medium-term Business Plan. Furthermore, 5% or more ROE is the minimal requirement for the payment.

Remuneration for the company president when the target goals have been attained is set so that the ratio of basic remuneration (fixed remuneration), annual bonus (short-term performance-linked) and stock remuneration (medium- to long-business performance-linked) roughly stands at 6:2:2.

Composition of remuneration for the company's Directors and part-time Audit & Supervisory Board Members



Internal control

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

Strengthening internal control

Internal audits

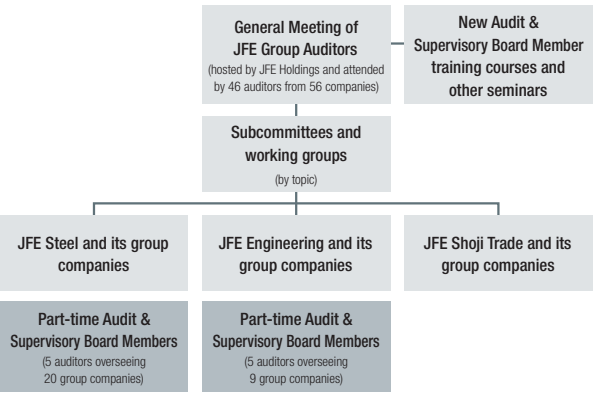
JFE Holdings, its operating companies and key Group companies had internal audit organizations comprising 159 people as of April 1, 2019. These organizations share information to enhance overall auditing within the Group.

Audits by Audit & Supervisory Board Members

Audit & Supervisory Board Members attend meetings of the Board of Directors, Group Management Strategy Committee and Management Committee as well as other important meetings. To audit how Directors execute their responsibilities, they conduct hearings with Directors and corporate officers regarding operational status and receive operational reports from subsidiaries. In addition to undergoing statutory audits, JFE companies take the following initiatives to ensure the effectiveness of internal auditing by the Audit & Supervisory Board Members and to strengthen coordination among the Members.

- A total of 36 full-time Audit & Supervisory Board Members have been appointed to 29 companies, including JFE Holdings. Operating company personnel are dispatched to Group companies as part-time Outside Audit & Supervisory Board Members. Each absentee Audit & Supervisory Board Member serves one to four subsidiaries to raise the quality of the audits by their Audit & Supervisory Board Members and enhance Group governance. Ten absentee Audit & Supervisory Board Members served 29 companies in total.
- The JFE Group Board of Auditors includes both full-time Audit & Supervisory Board Members of each Group company and part-time Audit & Supervisory Board Members. Subcommittees and working groups created to address specific issues meet autonomously to share information, investigate issues and enhance understanding. The findings of the year’s activities are presented at the general meeting of JFE Group Auditors and used for audits.

Structure of JFE Group Board of Auditors



Cooperation between Audit & Supervisory Board Members and Accounting Auditor

In FY2018, the Audit & Supervisory Board Members held eight scheduled or unscheduled meetings with Ernst & Young ShinNihon, JFE’s outside accounting auditor, in which the latter presented its audit plan, completed work and detailed results. The firm also presented a detailed explanation of its quality management system to confirm its validity. In turn, the Audit & Supervisory Board Members explained their own audit plans and other matters to the firm. The two sides also shared opinions on related matters.

Cooperation between Audit & Supervisory Board Members and Internal Auditing Department

In FY2018, the Audit & Supervisory Board Members held seven scheduled or unscheduled meetings with the internal auditing department, in which the latter presented its internal audit plan, work status and detailed results. During the meetings, the Audit & Supervisory Board Members also shared opinions with the department.

Operating company governance

Some Directors, Corporate Officers and Audit & Supervisory Board Members of JFE Holdings serve concurrently as the Directors or Audit & Supervisory Board Members of operating companies to strengthen governance and information sharing across the Group. To strengthen governance, JFE Holdings’ managers attend each operating company’s General Meeting of Shareholders and Management Planning Briefing, receive reports on their activities and discuss the managerial policies of subsidiaries.

Basic policies for strategic shareholdings and exercise of related voting rights

All shares held by the company are the shares of subsidiaries or affiliates.

The company’s wholly owned subsidiaries and operating companies, JFE Steel Corporation, JFE Engineering Corporation and JFE Shoji Trade Corporation (hereinafter the “Operating Companies”), hold stocks as strategic shareholdings for the aim of facilitating the promotion of business transactions and financial transactions, etc.

The company and the Operating Companies regularly review all strategic holdings at the Board of Directors meetings through examination of their significance and comparison between the company’s cost of capital and the return on investment, and consider from a comprehensive perspective, selling the shares which have become insignificant or cause damage risk to shareholders’ interest. In April 2016, the company decided to reduce its strategic holdings by approximately 100 billion yen and has sold a total of approximately 140 billion yen of its strategic holdings (on a market value basis) since FY2016. Furthermore, in FY2018, the Board of Directors, at a meeting held in August 2018, examined the significance of its strategic holdings and the return on investment from the above perspective.

The exercise of voting rights of strategic shareholdings is decided upon reviews by Operating Companies on the content of the proposal and is appropriately implemented in a way that will maximize shareholder interest. To be specific, the content of the proposal is to be checked by the investment application department and the investment control department, and approval will be given to proposals which are considered not to pose any threat to the maximization of interest of these Operating Companies as shareholders.

Of the shares for investment purposes held by JFE Steel, which has the largest balance sheet amount and account for the majority of the shares for investment purposes posted in the consolidated financial statements of the company, those shares of JFE Steel that are held for purposes other than pure investments are shown below.

	End of FY2016	End of FY2017	End of FY2018
Number of issues	243	242	238
Total balance sheet amount (billion yen)	314.4	259.1	241.0



Thorough Compliance



Basic Stance

In expanding our businesses in Japan and abroad, it is important that JFE maintains relationships of trust with all stakeholders, including its customers, shareholders and local communities. Trust can only be built upon a strong foundation of “Ensuring Thorough Compliance.” Misconduct and scandals resulting from compliance violations can instantly shatter the trust that has taken many years to establish. Therefore, JFE believes it is extremely important that all members of the organization deepen their knowledge and awareness of compliance and perform their jobs accordingly.

Compliance System

The JFE Group's Standards of Business Conduct guide employees to conduct their business activities based on the Corporate Vision and Corporate Values. They also help to strengthen awareness among all JFE Group executives and employees and ensure adherence to corporate ethics.

The Compliance Committee chaired by the president generally convenes every

quarter to deliberate basic policies and issues and then supervise their implementation. Each operating company has a similar in-house system for promoting and supervising compliance. In addition, operating companies have introduced a Corporate Ethics Hotline to ensure that crucial information regarding compliance can be communicated directly from the front lines to top management.

Ensure adherence to corporate ethical standards and compliance

Configured KPI (Group-wide)

- Steady execution of training to foster and maintain a sense of compliance
- Improve employee awareness of ethics reflected in JFE's Corporate Ethics Awareness Survey

Thorough compliance

The JFE Group conducts training on compliance with the Antimonopoly Act, insider trading restrictions, security export controls, the Construction Business Act, laws against bribery of public officials, etc. The Group has also compiled a Compliance Guidebook and distributed to employees and executives (domestic and overseas), to be used in activities such as collation, to ensure that the rules are fully communicated and informed.

Whistleblowing system

The JFE Group has established a Corporate Ethics Hotline to ensure that crucial information regarding compliance, including violation of the Antimonopoly Act, bribery, or all kinds of workplace harassment, can be communicated directly from the front lines to top management rapidly and accurately. The whistleblowing system aims to maintain corporate ethics, comply with laws and regulations, and prevent corruption. It is accessible to all officers and employees of the JFE Group as well as those of suppliers and other business partners. Additionally, an external hotline to a law firm is also provided. To encourage the active sharing of information, confidentiality is strictly respected and the hotline is operated under rules and regulations that protect people who report information or seek advice. Whistleblowing and requests for advice are regularly reported to full-time Audit & Supervisory Board Members. Moreover, the operational status of the system is reviewed every year by the Board of Directors.

Cases handled by the Corporate Ethics Hotline

Company	FY2016	FY2017	FY2018
JFE Holdings and operating companies	62	89	80

Prevention of bribery

The JFE Group does not tolerate any kind of illegal activity in Japan or any other country, including bribery, such as offering money or other benefits to public officials, and never resorts to these illegal activities to gain profit or resolve problems. Based on these thoughts, the Group issued JFE Group's Basic Stance on Preventing Bribery of Public Officials and disseminate it throughout the Group including operating companies. JFE Group also maintains various systems to prevent the bribery of public officials.

 JFE Group's Basic Stance on Preventing Bribery of Public Officials  
<https://www.jfe-holdings.co.jp/en/company/philosophy/anti-bribery.html>

Resisting organized crime

The JFE Group declares in its standards of business conduct that it will firmly resist all antisocial forces, and has established the JFE Group Policies for Addressing Antisocial Forces and Regulations for Addressing Violence Directed at Companies to clarify the measures to be taken in response to any issues.

Employee ethics awareness surveys

The JFE Group regularly conducts Corporate Ethics Awareness Surveys to quantitatively assess employees' awareness of ethics and help employees stay informed about JFE's corporate vision.

Antimonopoly Act compliance

The JFE Group views past violations of the Antimonopoly Act seriously and continues to implement thorough measures to eliminate the possibility of future infringements.

Risk Management



Risk Management System

JFE Holdings is responsible for comprehensive risk management in accordance with its Basic Stance for Building an Internal Control System. The JFE Group CSR Council, which is independent of the Audit & Supervisory Board and chaired by the President of JFE Holdings, collects specific information and enhance management for the purpose of reducing the frequency and impact of risks. The Corporate Officer responsible for risk works to identify potential risks associated with business activities, ethical and

regulatory compliance, the disclosure of financial reports and information, as well as ESG risks such as climate change, which have become increasingly important in risk management. If potential risks are identified, they are reviewed and assessed at an appropriate meeting as necessary for further examination or the deployment of counter-measures. The Board of Directors supervises the CSR and ESG activities of the JFE Group by receiving reports and holding discussion on its material issues.

 See pages 19 to 22 of the JFE Group CSR REPORT 2019. <https://www.jfe-holdings.co.jp/en/csr/data/index.html>

Response to risks

Intellectual property management

The JFE Group meticulously manages intellectual property across its diverse business activities. To prevent infringement on third-party intellectual property, it constantly monitors the latest information on intellectual property and implements all necessary measures.

Privacy protection

JFE has established the JFE Group Privacy Statement for managing information including “My Numbers,” which are personally identifiable numbers under Japan's social security and tax number systems.

To maintain the appropriate protection of personal information, employee trainings on the rules, which have been set in place in accordance with the privacy statement, have been conducted as stipulated in applicable laws of each country related to businesses and guidelines.

 JFE Group Privacy Statement  
<https://www.jfe-holdings.co.jp/en/privacy.html>

Information security

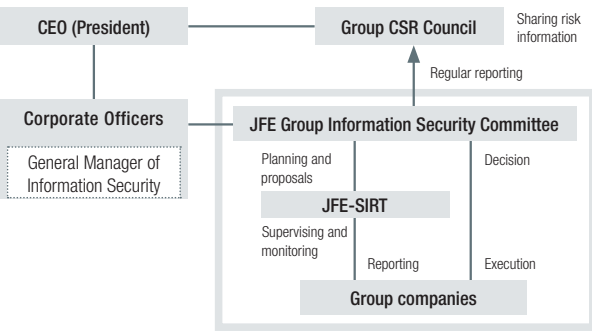
The JFE Group formulates various rules on information security management to prevent information leakage and system failures due to cyber-attacks and improper system use. Efforts are made to enhance information-security knowledge and awareness of rules among employees through training and education. Additionally, shared IT measures are applied in each Group company and regular information security audits are conducted to reinforce the overall information security management level in the Group.

Key issues related to information security are deliberated by the JFE Group Information Security Committee to determine Group policy.

Based on policies set by the committee, the JFE-SIRT\* formulates and implements information-security measures, performs information security audits, offers guidance on responding to incidents and generally enhances the level of Group-wide information security management.

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

JFE Group Information Security Governance System



Disaster response

The JFE Group aims to be a resilient company in times of disaster when seen from a business continuity planning (BCP) viewpoint. It conducts emergency drills for large earthquakes and tsunamis and has introduced a system to confirm people's safety, along with formulating emergency manuals and diversifying suppliers of procurement.

Stakeholder Relationships

Promotion of interactive communication










The JFE Group strives to maintain agreeable and favorable relationships with all stakeholders, including shareholders, customers, clients, employees and local communities, for the sustainable growth and medium- to long-term increase of corporate value.



Major activities

Stakeholders	Approach	Major communication methods, etc.	Others	
			Frequency (per year)	Scale, etc.
Shareholders/ Investors	We work to disclose information accurately, fairly and in a timely and appropriate manner as well as strive for active communication. We established the Investor Relations and Corporate Communications Department as an organization responsible for communication with domestic and international shareholders and investors, and promote constructive dialogue as well as provide management with the information acquired, with the aim of maintaining and improving the relationship of trust.	Ordinary general meeting of shareholders (convocation notices, notices of resolutions, etc.)	1	Approx. 150,000 persons (Unit shareholders)
		Investors meeting (financial results, medium-term business plans, etc.)	4	Approx. 500 persons in total
		Individual meetings (financial results, medium-term business plans, etc.)	As needed	Approx. 400 persons in total
		Briefings (at the branch offices of securities firms, etc.)	10	Approx. 1,000 persons
		Plant tours for shareholders (steel, engineering, shipbuilding bases, etc.)	25	Approx. 2,100 persons
		Publishing shareholder newsletters (JFE Dayori)	2 (Mid-year and annual)	Approx. 220,000 copies/issue
		Various reports, including integrated reports and CSR reports	1	Approx. 40,000 copies
		Information via websites (for shareholders and investors), etc.	As needed	
Customers	The Group believes that the stable supply of products and services and reliable quality assurance, along with advancing research and development, are necessary to meet customer needs. We will work to establish win-win relationships by continuously meeting customer needs and the trust they place in us.	Communication through sales activities and support for quality assurance	As needed	Conducted at each operating company
		Interviews and questionnaires, such as that on customer satisfaction	As needed	Conducted at each operating company
		Information via websites (product information), etc.	As needed	
Clients	CSR initiatives are being actively pursued together with our clients, who are important business partners. We have established Purchasing and Procurement Policies to promote fair and sincere procurement activities and to construct healthy relationships with clients.	Communication through purchasing activities	As needed	Conducted at each operating company
		Briefings and discussions	As needed	Conducted at each office
		Information via websites, etc.	As needed	
Employees	With the recognition of top management that creating workplaces to provide dignity and job satisfaction for all is essential for maximizing the potential of individuals, we have formulated the Basic Stance on Human Resource Management and Health Declaration and are conducting various activities toward attaining the goals.	Communication through daily operations and in the workplace	As needed	
		Internal newsletters and intranet	As needed	
		Various labor-management committees	2 to 4	Management and labor unions at each operating company
		Corporate Ethics Hotline	As needed	80 calls in FY2018
		Various training sessions	As needed	Position-specific, compliance, human rights, etc.
		Family days (visits by employee families, lunch at employees' cafeterias, etc.)	As needed	Conducted at each operating company
		Corporate Ethics Awareness Survey	1 (every 3 years)	At the company and operating companies
Local communities	To ensure business continuity at manufacturing bases where steelworks are located and elsewhere, constructing a relationship of trust with citizens in local communities and realizing coexistence and prosperity are crucial. We will pursue various activities with the aim of realizing sustainable growth and regional development, including continued initiatives toward ensuring safety and reducing our environmental impact.	Communication through local residents' associations, events, etc.	As needed	
		Events at manufacturing bases (festivals, etc.)	Approx. once in each region	Approx. 280,000 persons a year
		Plant tours	As needed	100,000 or more persons a year
		Clean-up activities (vicinity of manufacturing bases, regional cleaning, etc.)	As needed	
		Sports promotion (baseball or jogging workshops, various sports competitions, etc.)	As needed	
		Others (education at elementary schools, craft workshops, workplace experience events, etc.)	As needed	
		Information via websites (environmental information, etc.)	As needed	
		Social contribution through JFE 21st Century Foundation (various research support, regional activity support, etc.)	As needed	
		<a href="http://www.jfe-21st-cf.or.jp/eng">Web JFE 21st Century Foundation ▶ http://www.jfe-21st-cf.or.jp/eng</a>		

External recognition in recent years

Name of SRI index, etc.	Description of selection criteria, etc.	Evaluation / selection period
MSCI ESG Leaders Indexes MSCI Japan Empowering Women Index	Both indexes consist of companies with outstanding ESG evaluations selected by Morgan Stanley Capital International (MSCI). MSCI Japan Empowering Women Index consists of companies that are recognized as having outstanding gender diversity in each industry within the MSCI Japan IMI Top 500 Index. MSCI calculates multifaceted gender diversity scores based on data disclosed in accordance with the Act on the Promotion of Women's Participation and Advancement in the Workplace.	At June 2019   <small>THE INCLUSION OF JFE HOLDINGS IN ANY MSCI INDEX AND THE USE OF MSCI LOGOS, TRADEMARKS, SERVICE MARKS OR INDEX NAMES HEREIN, DO NOT CONSTITUTE A SPONSORSHIP ENDORSEMENT OR PROMOTION OF JFE HOLDINGS BY MSCI OR ANY OF ITS AFFILIATES. THE MSCI INDEXES ARE THE SOLE PROPERTY OF MSCI AND THE MSCI INDEX NAMES AND LOGOS ARE TRADEMARKS OR SERVICE MARKS OF MSCI OR ITS AFFILIATES.</small>
SNAM Sustainability Index	For this index, Sampo Japan Nipponkoa Asset Management (SNAM) applies a unique evaluation system that utilizes the experience and knowledge of SOMPO RISK MANAGEMENT (environmental survey) and IntegreX (social and governance survey). The company has been included in this index for eight consecutive years.	2012 to 2019 
Health & Productivity Stock Selection Program and Certified Health & Productivity Management Outstanding Organizations Recognition Program (White 500)	Under the Health & Productivity Stock Selection Program, the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange cooperate to select companies that have been strategically implementing employee health management from a business management viewpoint. The company was selected for the Health & Productivity Stock Selection for the first time in 2018. Additionally, the company was selected for Certified Health & Productivity Management Outstanding Organizations Recognition Program which certifies organizations that implement outstanding health management in collaboration with health insurance society members.	2018  
Competitive IT Strategy Company Stock Selection	The Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange cooperate to select companies actively applying IT to realize management innovation and enhanced earnings levels and productivity that will lead to medium- to long-term increase in corporate value and reinforced competitive strength. Selections are made per industry type, and the company has been selected for this index for five consecutive years. (2019 Competitive IT Strategy Company Stock Selection: 29 companies)	2015 to 2019 
Nadeshiko Brand	The Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange cooperate to select one to three companies per industry that have demonstrated outstanding achievement for the advancement of women. The company has been selected for this index three times up to this year.	2014 2015 2017 
DBJ Environmentally Rated Loan Program	This is the first financing system in the world to incorporate special environmental ratings, which uses a screening system developed by the Development Bank of Japan (DBJ) to evaluate environmental management levels and select outstanding companies with three interest stages according to evaluation points. Our company was rated as a top-ranking company that pursues excellent and advanced environmental initiatives in recognition of our advanced environmental management which we have pursued.	2016 
DBJ Employees' Health Management Rated Loan Program	This is the first financing option in the world to incorporate special health management ratings, which uses the unique screening system developed by the Development Bank of Japan (DBJ) to evaluate and select companies with excellent health management initiatives for employees, whereby setting financing terms and conditions according to the evaluation result. The company was rated as a top-ranking company with excellent advanced initiatives to employees' health management in recognition of our advanced health management which we have pursued.	2018 

Awards for technology and product development, etc. (FY2018)

JFE Steel

Award name	Description	Sponsor
The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology, Prize for Science and Technology (Development Category)	Development of Super-SINTER™, which reduces CO <sub>2</sub> emissions in the process of manufacturing raw materials for steelmaking	Ministry of Education, Culture, Sports, Science and Technology
National Commendation for Invention, Invention Award	Invention of shipbuilding plates with excellent brittle crack propagation resistance	Japan Institute of Invention and Innovation
Information Technology Award, Information Technology Special Prize (System Integration Prize)	JFE Group's accounting system overhaul project	Japan Institute of Information Technology
Energy-Efficient Machinery Award, JMF's President Award	Air leak visualization device to detect leak amount and direction (MK-750)	Japan Machinery Federation
JSPMI Prize, Chairman's Prize	Magnetic leakage flux tester for minute unevenness of steel sheets surface	Japan Society for the Promotion of Machine Industry
Okochi Memorial Technology Award	Development of SP3, high wear resistant heat treatment rail for heavy haul railways with extreme fine pearlite structure	Okochi Memorial Foundation

JFE Engineering

Award name	Description	Sponsor
Environment Minister's Award for Global Warming Prevention Activity	The MiReLiS™ BOG re-liquefaction facility	Ministry of the Environment
JSME Medal for New Technology	The AtoMS™, a city gas calorific value adjustment system with novel atomization technology	The Japan Society of Mechanical Engineers
Engineering Advancement Association of Japan Distinguished Service Award (Contribution to Environment)	Project team for the new BOG re-liquefaction and booster facility	Engineering Advancement Association of Japan
Engineering Advancement Association of Japan Distinguished Service Award (Advancement of Engineering)	Toyohashi biomass project team	Engineering Advancement Association of Japan



Management Organization



Executive Structure (as of July 1, 2019)

Category	Name	Career, experience, and knowledge	Appointment as members of advisory bodies to the Board of Directors	
			Nomination Committee	Remuneration Committee
Directors	<b>A</b> Koji Kakigi	1977 Joined Kawasaki Steel Corporation 2015 Representative Director, President and CEO of JFE Steel Corporation, Representative Director of JFE Holdings, Inc. 2019 Representative Director, President and CEO of JFE Holdings, Inc. (current post)  Mr. Kakigi has abundant experience and knowledge required for management of the Group, which he has accumulated through his experience in operations in human resource and labor administration departments, and execution of duties as Corporate Officer in general administration, legal, accounting, finance, and procurement, in the company and JFE Steel Corporation.	Member	Member
	<b>B</b> Yoshihisa Kitano	1982 Joined Kawasaki Steel Corporation 2019 Representative Director, President and CEO of JFE Steel Corporation (current post), Representative Director of JFE Holdings, Inc. (current post)  Mr. Kitano has abundant experience and knowledge required for management of the Group, which he has accumulated through his experience in operations in steel making technology and production control departments, and execution of duties as Corporate Officer such as supervision of steel works and overseas business, corporate planning, and IT in JFE Steel Corporation.	Member	
	<b>C</b> Masashi Terahata	1982 Joined Kawasaki Steel Corporation 2018 Representative Director and Executive Vice President of JFE Steel Corporation 2019 Representative Director and Executive Vice President of JFE Holdings, Inc. (current post)  Mr. Terahata has abundant experience and knowledge required for management of the Group, which he has accumulated through his experience in operations such as general administration and legal departments in the company as well as operations in human resource and labor administration departments, and execution of duties as Corporate Officer in management divisions such as accounting, finance and procurement departments in JFE Steel Corporation.		Member
	<b>D</b> Naosuke Oda	1977 Joined NKK Corporation 2012 Representative Director and Executive Vice President of JFE Steel Corporation 2016 Representative Director, President and CEO of JFE Shoji Trade Corporation (current post) 2017 Director of JFE Holdings, Inc. (current post)  Mr. Oda has abundant experience and knowledge required for management of the Group, which he has accumulated through his experience in operations related to sales of automotive steel at JFE Steel Corporation, and supervising sales divisions as Corporate Officer.		
	<b>E</b> Hajime Oshita	1982 Joined NKK Corporation 2017 Representative Director, President and CEO of JFE Engineering Corporation (current post), Director of JFE Holdings, Inc. (current post)  Mr. Oshita has abundant experience and knowledge required for management of the Group, which he has accumulated through his experience in corporate planning, accounting and finance, and a wide range of duties as Corporate Officer, including overseeing domestic and overseas businesses at JFE Engineering Corporation.		

Category	Name	Career, experience, and knowledge
Audit & Supervisory Board Members	<b>F</b> Nobuya Hara	1984 Joined NKK Corporation 2016 Audit & Supervisory Board Member of JFE Steel Corporation (current post) 2017 Audit & Supervisory Board Member of JFE Holdings, Inc. (current post)  Mr. Hara has abundant experience and knowledge in finance and accounting that he has accumulated through operations related to corporate planning, accounting and finance at JFE Steel Corporation as well as accounting operations at the company. He also has abundant experience and knowledge gained through corporate management operations at the group companies of JFE Steel Corporation, in addition to duties as its Audit & Supervisory Board Member.
	<b>G</b> Kumiko Baba	1989 Joined Toshiba Corporation 2014 Joined JFE Engineering Corporation 2018 Vice President of JFE Engineering Corporation 2019 Audit & Supervisory Board Member of JFE Holdings, Inc. (current post)  Ms. Baba had engaged in operations such as contract negotiation with overseas parties and business alliances and launches of new business in Toshiba Corporation. Since joining JFE Engineering Corporation, she has executed duties as Corporate Officer in the company in addition to supervision of overseas businesses and accounting and finance related operations and thus she has abundant experience and knowledge about finance and accounting.

Outside Executive Structure (as of July 1, 2019)

Category	Name	Main concurrent positions	Independent executive	Expertise and background						Appointment as members of advisory bodies to the Board of Directors	
				Corporate management/ Management strategy	Engineering	Global management	Finance and accounting	Legal	Academic	Nomination Committee	Remuneration Committee
Directors	<b>H</b> Masao Yoshida	Special Advisor of Furukawa Electric Co., Ltd.	Independent							Member	
	<b>I</b> Masami Yamamoto	Director and Senior Advisor of Fujitsu Limited	Independent							Chair	Member
	<b>J</b> Nobumasa Kemori	Executive Advisor of Sumitomo Metal Mining Co., Ltd.	Independent								Chair
Audit & Supervisory Board Members	<b>K</b> Shigeo Ohyagi	Senior Advisor of Teijin Limited	Independent							Member	Member
	<b>L</b> Isao Saiki	Partner Lawyer of Abe, Ikubo & Katayama Law Firm	Independent								Member
	<b>M</b> Tsuyoshi Numagami	Board Member and Executive Vice President of HITOTSUBASHI UNIVERSITY	Independent							Member	