

# Environmental Management

## Environmental Philosophy and Strategies

The JFE Group's environmental philosophy and strategies target the development of innovative technologies and international cooperation aimed at protecting the global environment by having the intention to achieve "Accordance with Global Environment" and "Improvement of Global Environment" within the corporate activity.

### Environmental Philosophy

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

### Environmental Strategies

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

## Framework for Environmental Management

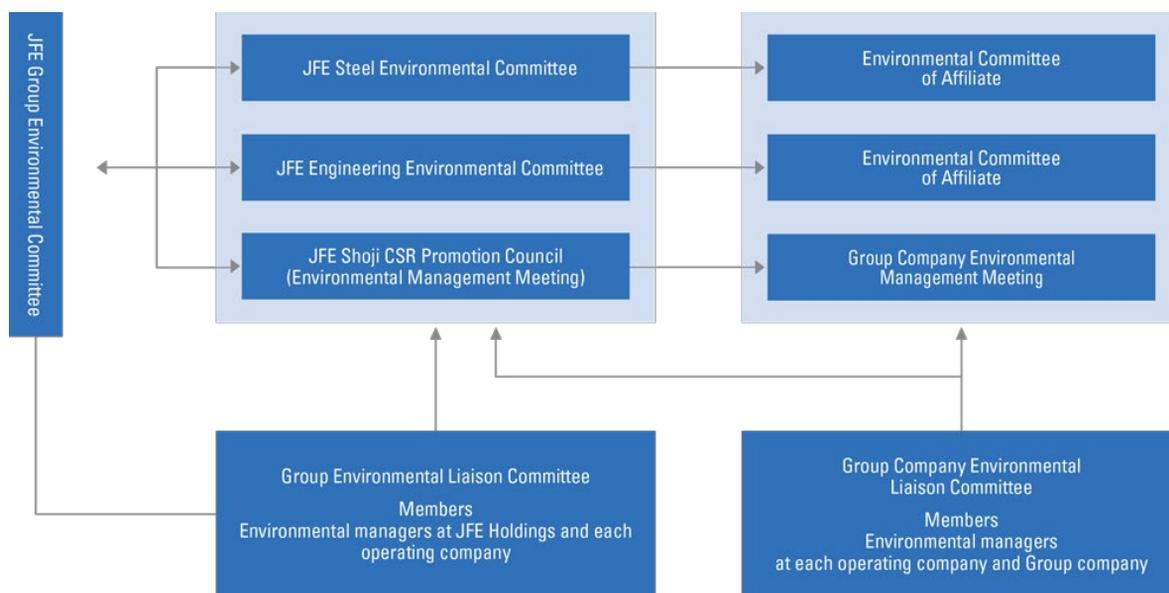
The JFE Group Environmental Committee, chaired by the president of JFE Holdings and operating under the JFE Group CSR Council, sets goals for environmental protection, monitors the progress of such initiatives and works to improve the Group's overall environmental performance.

Key issues for corporate management such as climate change are deliberated at the Group Management Strategy Committee as well and reported to the Board of Directors. The board oversees environmental challenges by discussing the reported material. Additionally, specialized committees set up by JFE Group operating companies and affiliates implement specific activities.

For the Group CSR System, please refer to the following information.

➤ [CSR Structure: JFE CSR System](#) (P. 29)

## ■ Environmental Management System



## Environmental Management System

Acquisition of ISO 14001 certification is an important part of every JFE Group company’s environmental program. All global production sites of JFE Steel and JFE Engineering and major offices of JFE Shoji have received the certification, encompassing 75% of 41,305 employees at 80 companies covered in this report and 58% covered for total sites. In FY2019, there was no material breach of any environmental law or regulation involving fines by any operating company, and the total amount of fines and penalties was zero yen.

### **ST** JFE Steel

JFE Steel has an Environment Management Department at its head office and in each business office, and the Environmental Committee chaired by its president and the Environment Management Committee in each local office.

### **EN** JFE Engineering

JFE Engineering’s Environmental Management System, which encompasses all employees, works to minimize environmental impact at production sites and branch offices and contribute to environmental protection through all products and services. The major strategies for FY2020 are (1) promote environmental contribution through products for mitigating global warming and climate change, (2) promote effective energy conservation and resource recycling that reflect the actual circumstances of each site and operation, and (3) prevent violations of the Waste Management and Public Cleansing Law.

### **SH** JFE Shoji

JFE Shoji obtained ISO 14001 certification for its head office, Osaka branch, and Nagoya branch in 2000.

For quantitative data related to ISO 14001, please refer to the following information.

- [ESG Data: Environmental Data](#) (P. 165)

## Environmental Audits

In addition to the regular internal and external audits at ISO 14001-certified sites, the audit and environment departments at each operating company's head office conduct independent environmental audits at their production sites.

### JFE Steel

Once a year, JFE Steel's Audit Department and the Environment, Disaster Prevention and Recycling Department conduct an environmental audit at each operational site. For group companies, companies are grouped by risk assessments of equipment, etc., using self-checks based on checklists, part of an extensive audit conducted every one to five years.



Environmental audit of JSGL in Indonesia

### JFE Engineering

JFE Engineering places a top priority on complying with environmental laws and regulations.

To verify compliance with these regulations, environmental inspections are conducted at all construction sites by the department responsible for construction, and the Tsurumi and Tsu manufacturing sites conduct self-checks on an annual basis to confirm legal compliance. In addition, about 50 locations, selected from among the manufacturing sites, construction sites in Japan, and group company sites, are audited each year by the Safety and Environment Department to confirm compliance with environmental laws and regulations. JFE Engineering also conducts internal audits on its own environment management system to evaluate and enhance the effectiveness of various environment-related initiatives.

### JFE Shoji

At JFE Shoji, the Environmental Auditing Department conducts internal environmental audits at all of its affiliate companies that are ISO 14001-certified annually. Non-certified group companies are also audited once every three years by the Audit Department.

For quantitative data related to environmental audits, please refer to the following information.

▶ [ESG Data: Environmental Data](#) (P. 165)

## Environmental Education

The JFE Group actively provides education to foster a corporate culture of environmental protection. Education at operating companies includes training for new recruits and newly promoted employees as well as specific environmental-protection training organized by position and job.

### JFE Steel

JFE Steel encourages employees to obtain qualifications as pollution-control managers. A training program for environmental managers at group companies was launched in FY2011. In addition, JFE Steel provides employees with training to ensure compliance with environmental laws, disseminates information about regulatory revisions at its Environmental Liaison Committee meetings for Group companies, and organizes brush-up training in waste management skills for onsite personnel.

### JFE Engineering

JFE Engineering educates all employees about environmental issues to increase their understanding of the company's related policies and initiatives. To ensure proper environmental management at its production sites and construction sites, training is often tailored to the specific operations of employees, helping them to enhance their capabilities.

In FY2020, the Safety and Environment Department and other departments worked together to create and implement an education program with details tailored to the specific needs of each department.

### JFE Shoji

JFE Shoji provides all employees with general environmental training in compliance with ISO 14001 and specialized training for internal audit staff on an annual basis. In addition, each company performs a self-check using its own extensive checklist to ensure understanding and rigorous compliance with environmental laws. Also, JFE Shoji provides environmental training to new executives and information about revised laws and regulations to environmental management personnel.

For quantitative data related to environmental education, please refer to the following information.

➤ [ESG Data: Environmental Data](#) (P. 165)

## Environmental Accounting

### Basic Policy

The JFE Group is saving energy and reducing its environmental impacts by making its production facilities increasingly efficient and introducing more environmentally friendly equipment. Such investments, which are categorized as environmental costs, cover equipment, facilities, and related expenditures for environmental protection and impact reduction.

### Environmental Investment and Expenses

Environmental capital investment totaled 46.8 billion yen and expenses amounted to 113.1 billion yen in FY2019. Capital expenditure included 26.7 billion yen for measures to prevent global warming (measures to address climate change), 11.0 billion yen for air pollution countermeasures, and 4.1 billion yen for water pollution prevention. Environmental capital investment as a percentage of overall capital investment was roughly 19%.

Environmental expenses for environmental activities included 34.1 billion yen for air pollution countermeasures, 27.6 billion yen for global warming countermeasures (measures to address climate change) and 18.3 billion yen for industrial water recycling. Environmental R&D expenses came to 11.3 billion yen.

### Capital Investment

To save energy and reduce environmental impacts stemming from production, the JFE Group invests in environmental technologies for plants and equipment. Cumulative investment in energy savings, totaling 532.1 billion yen since 1990, has enabled the company to achieve energy efficiencies that are among the highest in the world. In total, the Group has invested 727.6 billion yen in environmental protection since 1973.

### Results of Environmental Activities

Environmental protection costs include efforts to lower unit-based CO<sub>2</sub> emissions to prevent global warming and measures to reduce final-disposal waste and conserve natural resources through recycling. Other benefits include reduced discharges of airborne and waterborne substances with pollution loads and compliance with statutory regulations concerning exhaust gas emissions and discharged water.

The monetary value of energy savings realized through environmental capital investments and expenses in FY2019 is about 4.6 billion yen.

## ■ Breakdown of Environmental Costs

Main Items		FY2019	
		Investment (billion yen)	Cost (billion yen)
Management	Impact monitoring and measurement, and EMS expenses and education	0.1	2.6
Global warming countermeasures	Saving and efficiently using energy	26.7	27.6
Conservation of natural resources	Recycling industrial water	3.9	18.3
	Recycling and waste management of internally generated materials, etc.	0.06	5.1
Environmental protection	Air pollution countermeasures	11	34.1
	Water pollution countermeasures	4.1	11.3
	Prevention of soil contamination, noise, vibration, and subsidence	0.04	0.6
Other	Charges, etc.	-	1.5
R&D	Technologies for protecting the environment, saving energy, and preventing global warming	1	11.3
Societal activities	Support for nature preservation and forestation, information disclosure, exhibitions, and public relations	-	0.7
Total		46.8	113.1

Note: Data cover all investment activities of JFE Steel Corporation and R&D activities of JFE Engineering Corporation.

For quantitative data related to environmental accounting, please refer to the following information.

▶ [ESG Data: Environmental Data](#) (P. 165)

## Development and Provision of Eco-friendly Processes and Products

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

▶ [Development and Provision of Eco-friendly Processes and Products](#) (P. 46)

## Material Flow

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

- ▶ [Material Flow](#) (P. 61)

## Related Links

---

- ▶ [JFE Steel's Website: Environmental Initiatives \(Japanese only\)](https://www.jfe-steel.co.jp/research/environment.html)  
(<https://www.jfe-steel.co.jp/research/environment.html>)
- ▶ [JFE Engineering's Website: 360° JFE Engineering](https://www.jfe-eng.co.jp/en/360_jfe_engineering/#env)  
([https://www.jfe-eng.co.jp/en/360\\_jfe\\_engineering/#env](https://www.jfe-eng.co.jp/en/360_jfe_engineering/#env))
- ▶ [JFE Shoji's Website: Environment Management](https://www.jfe-shoji.co.jp/en/csr/environment/) (<https://www.jfe-shoji.co.jp/en/csr/environment/>)