JFE Group
CSR REPORT 2014

Environmental Data Book

This book contains supplemental information and data relating to environmental measures for three JFE Group companies, as well as information and data relating to the JFE Group's recycling business.

Please read this book in conjunction with the "JFE Group CSR Report 2014" to gain a more comprehensive understanding of JFE's environmental initiatives.

CONTENTS

JFE

● Scope of Report

Reporting Period

FY2013 (April 1, 2013 to March 31, 2014)
Data for the recycling business covers activities undertaken during the period up to August 31, 2014.

Organizations Covered

1. JFE Holdings, Inc. and its operating companies:
- JFE Steel Corporation
- JFE Engineering Corporation
- JFE Shoji Trade Corporation

2. The following items include data from "Major Domestic Group Companies Included in the Scope of Reporting" listed below.
[Environment]
- Status of ISO 14001 certification
- CO_2 emissions
- Energy consumption (JFE Steel Group, JFE Engineering Group)
- Electricity consumption (JFE Shoji Trade Group)

[Society]
- Compliance training
- Rate of lost-work time injuries and severity rate (JFE Shoji Trade Group)

Major Domestic and Overseas Group Companies Included in the Scope of Reporting

JFE Steel Group

JFE Steel Corporation and 38 consolidated subsidiaries (Total: 39 companies)
JFE Mineral Company, Ltd., Mizushima Ferroalloy Co., Ltd., JFE Material Co., Ltd., Chiba Riverment and Cement Corp., Mizushima Riverment Corp., JFE Precision Co., Ltd., JFE Plastic Resource Corporation, JFE Bars & Shapes Corp., JFE Metal Products & Engineering Inc., JFE Galvanizing & Coating Co., Ltd., JFE Container Co., Ltd., JFE Welded Pipe Manufacturing Co., Ltd., JFE Steel Pipe Co., Ltd., Galvatex Corp., Kawasaki Kokan Co., Ltd.*, JFE Pipe Fitting Mfg. Co., Ltd., JFE Tubic Corp.*, JFE Techno-wire Corp., River Steel Co., Ltd.*, JFE Kozai Corp., JFE Electrical Steel Co., Ltd., Daiwa Kohtai Co., Ltd.*, JFE Mechanical Co., Ltd., JFE Electrical & Control Systems, Inc.*, JFE Advantech Co., Ltd.*, JFE Civil Corp.*, JFE Sekkei Ltd.*, JFE Logistics Corp., JFE West Technology Corporation*, JFE Wing Corp.*, JFE Techno-Research Corp.*, JFE Systems, Inc.*, JFE Chemical Corp., JFE Life Corp., JFE East Japan GS Co., Ltd.*, JFE West Japan GS Co., Ltd.*, JFE Apple East Corp.*, JFE Apple West Corp.*
Note: River Steel Co., Ltd., JFE Civil Corp. and JFE West Japan GS Co., Ltd. are not included in the scope of reporting for environmental data.
* Excluded from the scope of regular reporting required by the Energy Saving Act.

JFE Engineering Group

JFE Engineering Corporation and 11 consolidated subsidiaries (Total: 12 companies)
JFE Engineering Corporation, Asuka Soken Co., Ltd., Japan Pipeline Engineering Corporation, JFE Kankyo Corporation, JAPAN Recycling Corporation, Recycling Management Japan, Inc., JFE Urban Recycle Corporation, Kitanippon Industrial Co., Ltd., JFE Technos Corporation, Fuji Kako Co., Ltd., Tohoku Dock Tekko K.K., JFE Rail Link Co., Ltd.

JFE Shoji Trade Group

[Environment]
JFE Shoji Trade Corporation and 30 consolidated subsidiaries (steel processing companies) (Total: 31 companies)
17 domestic subsidiaries
JFE Shoji Osaka Tinplate Center Corporation, JFE Shoji Coil Center Corporation, JFE Shoji Kohnan Steel Center Co., Ltd., Aichi Kanzai Kogyo Corporation, Osaka Steel Corporation, Kyusyu-Tech Corporation, Kurashiki Steel Corporation, Shin Nihon Kogyo Corporation, Taisei Kogyo Corporation, Toyo Kinzoku Corporation, Tochigi Shearing Corporation, Naigai Steel Corporation, Nagano Can Corporation, Niigata Steel Corporation, Mizushima Steel Co., Mizushima Metal Products Corporation, Hokuriku Steel Co., Ltd.
13 overseas subsidiaries
Dongguan JFE Shoji Steel Products Co., Ltd., Guangzhou JFE Shoji Steel Products Co., Ltd., Zhejiang JFE Shoji Steel Products Co., Ltd., Jiangsu JFE Shoji Steel Products Co., Ltd., JFE Shoji Steel Philippines, Inc., Central Metals (Thailand) Ltd., Steel Alliance Service Center Co., Ltd., JFE Shoji Steel Vietnam Co., Ltd., JFE Shoji Steel India Private Limited, JFE Shoji Steel Malaysia Sdn. Bhd., P.T. JFE Shoji Steel Indonesia, Vest Inc., JFE Shoji Steel de Mexico, S.A. de C.V.

[Society]
JFE Shoji Trade Corporation and 78 consolidated subsidiaries (Total: 79 companies)
39 domestic subsidiaries
JFE Shoji Usuitakenzai Corporation, JFE Shoji Electronics Corporation, JFE Shoji Osaka Tinplate Center Corporation, JFE Shoji Coil Center Corporation, JFE Shoji Pipe & Fitting Trade Corporation, JFE Shoji Kohnan Steel Center Co., Ltd., JFE Shoji Service Corporation, JFE Shoji Machinery & Materials Corporation, JFE Shoji Jutaku Shizai Corporation, JFE Shoji Oil Co., Ltd., JFE Shoji Wire Trade Co., Ltd., JFE Shoji Zosen Kako Corporation, JFE Shoji Trade Steel Construction Materials Corporation, JFE Shoji Terre One Corporation, JFE Shoji Business Support, Inc., JFE Shoji Trade Matech Inc., J Tekken Construction Produce Corporation, Aichi Kanzai Kogyo Corporation, Osaka Steel Corporation, Kadota Kozai Corporation, Kadowaki Kozai Corporation, Kawasho Foods Corporation, Kyusyu-Tech Corporation, Kurashiki Steel Corporation, K&I Tubular Corporation, Shin Nihon Kogyo Corporation, Taisei Kogyo Corporation, Tohsen Corporation, Toyo Kinzoku Corporation, Tochigi Shearing Corporation, Naigai Steel Corporation, Nagano Can Corporation, Niigata Steel Corporation, Hokuriku Kogyo Co., Ltd., Hokuriku Steel Co., Ltd., Hoshi Kinzoku Corporation, Mizushima Steel Co., Mizushima Metal Products Corporation, Yashimanada Corporation
39 overseas subsidiaries
JFE Shoji Trade America Inc., JFE Shoji Trade Shanghai Co., Ltd., JFE Shoji Trade Beijing Co., Ltd., JFE Shoji Trade Guangzhou Co., Ltd., JFE Shoji Trade Hong Kong Ltd., JFE Shoji Trade Thailand Ltd., JFE Shoji Trade Korea Ltd., JFE Shoji Trade Philippines, Inc., JFE Shoji Trade Vietnam Co., Ltd., JFE Shoji Trade India Pvt. Ltd., JFE Shoji Trade Malaysia Sdn. Bhd., P.T. JFE Shoji Trade Indonesia, JFE Shoji Trade Australia Pty., Ltd., JFE Shoji Trade Do Brasil Ltda., Meridian Capital Limited, Dongguan JFE Shoji Steel Products Co., Ltd., Guangzhou JFE Shoji Steel Products Co., Ltd., Zhejiang JFE Shoji Steel Products Co., Ltd., Jiangsu JFE Shoji Steel Products Co., Ltd., JFE Shoji Steel Philippines, Inc., LM Corporation, Central Metals (Thailand) Ltd., Steel Alliance Service Center Co., Ltd., New Bangpoo Manufacturing Co., Ltd., JFE Shoji Steel Vietnam Co., Ltd., JFE Shoji Steel Malaysia Sdn. Bhd., P.T. JFE Shoji Steel Indonesia, JFE Shoji Steel India Private Limited, JFE Shoji Steel America Inc., Vest Inc., JFE Shoji Steel de Mexico, S.A. de C.V., Kawasho (Dalian) Ltd., Kawasho Foods (Thailand) Co., Ltd., Kawasho Foods (Gulf) FZE, Marushin Canneries (Malaysia) Sdn. Bhd., JFE Shoji Electronics Shanghai Corp., JFE Shoji Electronics Hong Kong Limited., JFE Shoji Electronics (Thailand) Limited, JFE Shoji Electronics Malaysia Sdn. Bhd.

Organizational Profile

JFE Steel Company Profile

JFE Steel Corporation

- Head office: 2-2-3 Uchisaiwaicho, Chiyoda-ku, Tokyo 100-0011
- Tel: +81-3-3597-3111
- Net sales (consolidated): 2,691.6 billion yen
- Employees (consolidated): 42,481

Main Works

East Japan Works (Chiba District)

1 Kawasaki-cho, Chuo-ku, Chiba-shi, Chiba 260-0835
Tel: +81-43-262-2024 Fax: +81-43-262-2967
Main business
Production of hot rolled sheets and strips, cold rolled sheets and strips, stainless steel sheets and strips, coated sheets, UOE pipes, iron powders and solvents.

East Japan Works (Keihin District)

1-1 Ohgishima, Kawasaki-ku, Kawasaki-shi, Kanagawa 210-0868
Tel: +81-44-322-1111
Main business
Production of plates, hot rolled sheets, cold rolled sheets, galvanized steel sheets, high-performance steel sheets, seamless steel pipes and welded steel pipes.

Chita Works

1-1 Kawasaki-cho, Handa-shi, Aichi 475-8611
Tel (for general): +81-569-24-2101 Fax: +81-569-24-2022
Main business
Production of machine structural steel pipes, automotive steel pipes, material pipes, general structural steel pipes and steel pipes for plumbing.

West Japan Works (Kurashiki)

1 Mizushima Kawasaki-dori, Kurashiki-shi, Okayama 721-8511
Tel: +81-86-447-2020 (main)
+81-86-447-2102 (visitor center reception desk)
Fax: +81-86-447-2131
Main business
Production of hot rolled sheets, cold rolled sheets, coated sheets, electrical sheets, plates, sheet piles, H-shapes, rails, bars, wire rods and UOE pipes.

West Japan Works (Fukuyama District)

1 Kokan-cho, Fukuyama-shi, Hiroshima 721-8510
Tel: +81-84-945-3118 Fax: +81-84-945-3808
Main business
Production of hot rolled sheets, cold rolled sheets, coated sheets, electrical sheets, plates, sheet piles, H-shapes, rails, bars, wire rods and UOE pipes.

JFE Engineering Company Profile

JFE Engineering Corporation

- Tokyo head office: Marunouchi Trust Tower North 19F, 1-8-1 Marunouchi, Chiyoda-ku, Tokyo 100-0005
- Tel: +81-3-6212-0800 (main) Fax: +81-3-6212-0802
- Yokohama head office: 2-1, Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-8611
- Tel: +81-45-505-7435 (main) Fax: +81-45-505-8902 Tel: +81-45-505-8953 (PR)
- Net sales: 284.1 billion yen
- Employees: 7,366

Main Works

Tsurumi Engineering and Manufacturing Center

2-1 Suehiro-cho, Tsurumi-ku, Yokohama, Kanagawa 230-8611
Tel: +81-45-505-7435 Fax: +81-45-505-8902
Main business
Production of engines, shield tunneling machines, conveyance machines, boilers and turbines, water facilities, iron manufacture facilities.

Tsu Works

1 Kumozu-kokan-cho, Tsu-shi, Mie 514-0393
Tel: +81-59-246-2010 Fax: +81-59-246-2781
Production of steel structures such as bridges, harbor structures and building steel frames.

JFE Shoji Trade Company Profile

JFE Shoji Trade Corporation

- Tokyo head office: Otemachi Financial City North Tower, 1-9-5 Otemachi, Chiyoda-ku, Tokyo 100-8070
- Tel: +81-3-5203-5053 Fax: +81-3-5203-5289
- Osaka head office: Dojima Avanza, 1-6-20, Dojima, Kita-ku, Osaka 530-8318
- Tel: +81-6-4795-7011 Fax: +81-6-4795-7400
- Net sales: 1,781.3 billion yen
- Employees: 6,207

JFE Group

Status of ISO 14001 Certification

All JFE Steel and JFE Engineering production sites and JFE Shoji Trade domestic business offices have received certification. The status of certification for Group companies included in the scope of reporting are as follows.

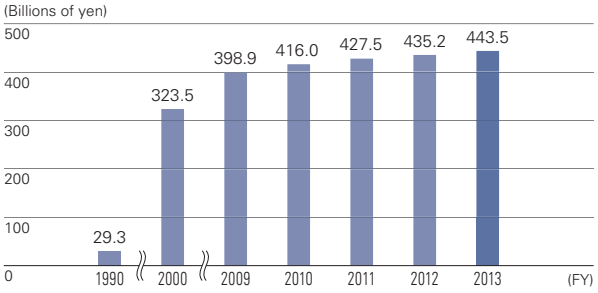
List of ISO 14001 Certified Companies (includes certification limited to certain sites of a company)

JFE Steel Corporation	All production sites of JFE Steel Corporation and the following 18 consolidated subsidiaries (Total: 19 companies)
	JFE Mineral Company, Ltd.
	Mizushima Ferroalloy Co., Ltd.
	JFE Material Co., Ltd.
	JFE Plastic Resource Corporation
	JFE Bars & Shapes Corp.
	JFE Metal Products & Engineering Inc.
	JFE Galvanizing & Coating Co., Ltd.
	JFE Container Co., Ltd.
	JFE Welded Pipe Manufacturing Co., Ltd.
	JFE Pipe Fitting Mfg. Co., Ltd.
	River Steel Co., Ltd.
	JFE Electrical Steel Co., Ltd.
	Daiwa Kohtai Co.
	JFE Mechanical Co., Ltd.
	JFE Electrical & Control Systems, Inc.
	JFE Logistics Corp.
	JFE Techno-Research Corp.
	JFE Chemical Corp.
JFE Engineering Corporation	All production sites of JFE Engineering Corporation and the following 3 consolidated subsidiaries (Total: 4 companies)
	JFE Kankyo Corporation
	Japan Recycling Corporation
	Fuji Kako Co., Ltd.
JFE Shoji Trade Corporation	All domestic business offices of JFE Shoji Trade Corporation and the following 7 consolidated subsidiaries (Total: 8 companies)
	Naigai Steel Corporation
	JFE Shoji Kohnan Steel Center Co., Ltd.
	JFE Shoji Coil Center Corporation
	Mizushima Steel Co. (including Mizushima Metal Products Corporation)
	Toyo Kinzoku Corporation
	Taisei Kogyo Corporation
	Hokuriku Steel Co., Ltd.

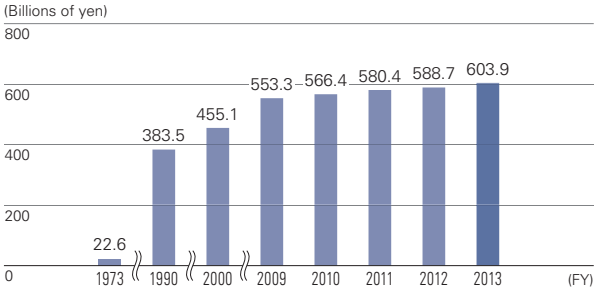
JFE Group's Environmental Accounting

● Environmental Accounting

Cumulative Investment in Energy Saving



Cumulative Investment in Environmental Preservation Measures



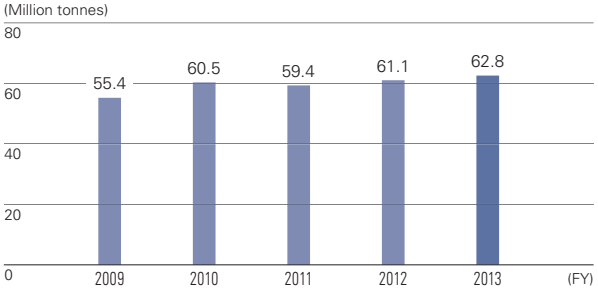
Breakdown of Environmental Costs

Main Items		FY2012		FY2013	
		Investment (million yen)	Cost (million yen)	Investment (million yen)	Cost (million yen)
Management	Monitoring and measurement of environmental impact, EMS-related expenses, environmental education	300	2,300	100	2,400
Global warming countermeasures	Energy saving, efficient use of energy	7,600	37,500	8,400	39,200
Conservation of natural resources	Recycling industrial water, waste management	300	17,300	800	17,600
	Other (including recycling and waste management of internally generated materials)	300	4,700	100	4,500
Environmental protection	Prevention of air pollution	6,400	29,600	12,300	33,600
	Prevention of water pollution	900	9,300	1,900	9,900
	Other (prevention of soil contamination, noise, vibrations and subsidence)	10	1,800	10	1,400
Other	Charges, etc.	—	1,300	—	1,400
R&D	Technology development for protecting the environment, saving energy and preventing global warming	5,800	13,800	4,400	13,100
Social activities	Support for nature conservation and forestation activities, information disclosure, exhibitions, public relations	—	700	—	700
Total		**21,600**	**118,300**	**28,000**	**123,800**

Scope of calculation: R&D at JFE Steel Corporation and JFE Engineering Corporation

CO_2 Emissions of the JFE Group

CO_2 Emissions of JFE Group



Breakdown of CO_2 Emissions by Group (FY2013)

JFE Steel Group	JFE Engineering Group	JFE Shoji Trade Group
62,689,000 t-CO_2	72,000 t-CO_2	29,000 t-CO_2
99.84%	0.11%	0.05%

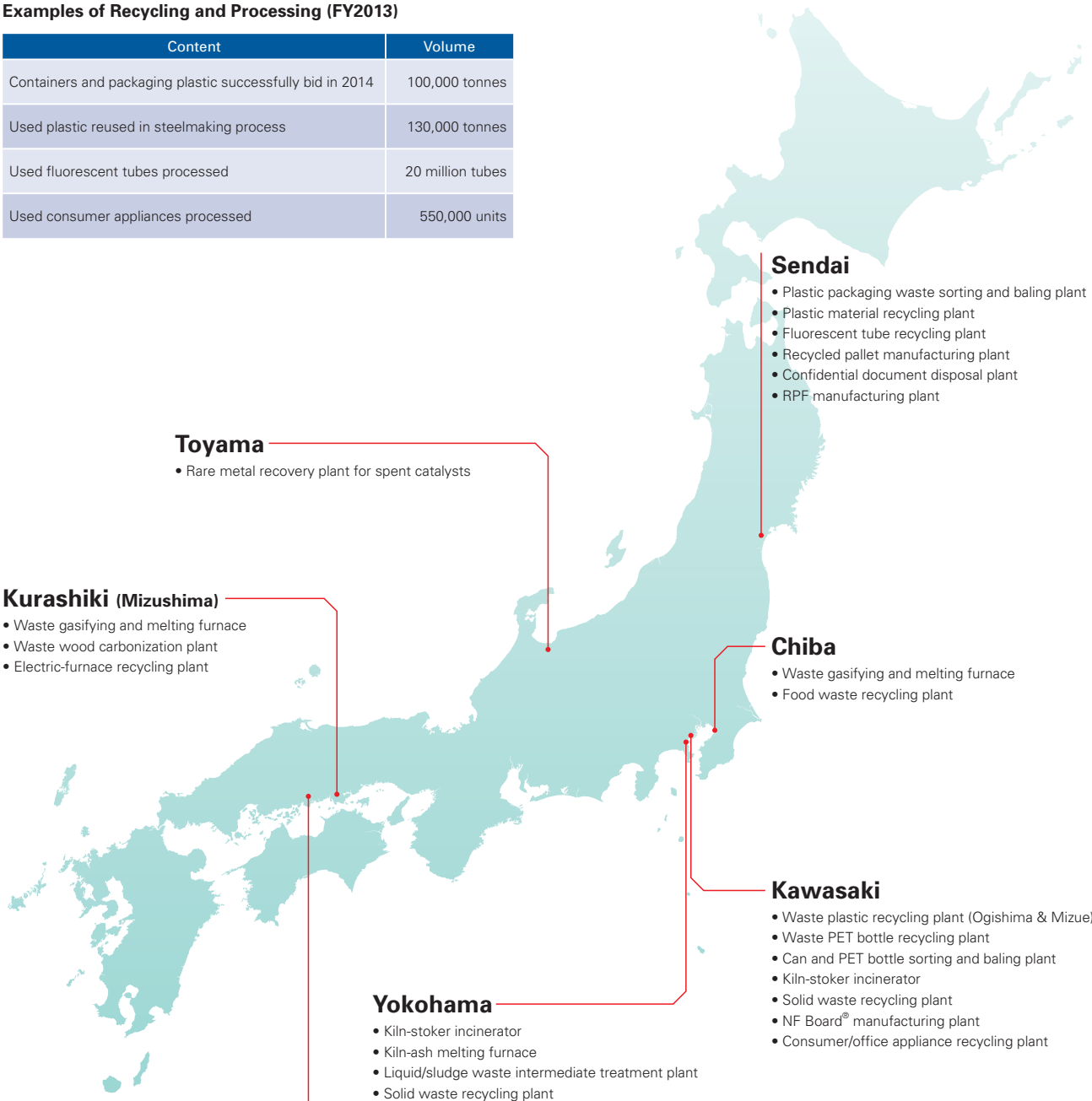
* Values are for a total of 79 companies including JFE Steel and its 35 major domestic subsidiaries, JFE Engineering and its 11 major domestic subsidiaries and JFE Shoji Trade and its 30 major domestic and overseas subsidiaries.

CO_2 Emission Factor for Purchased Electricity
- JFE Steel uses the emission factor of the Japan Iron and Steel Federation's Voluntary Action Plan. Note that values for FY2012 were used for FY2013.
- JFE Engineering uses the unadjusted emission factors of each electric power company for each fiscal year.
- JFE Steel Group companies, excluding JFE Steel, and JFE Shoji Trade Group companies use the CO_2 equivalent of 0.000550 (t-CO_2/kWh) for the FY2012 unadjusted emission factors of each electric power company.

JFE Group Recycling Businesses

Examples of Recycling and Processing (FY2013)

Content	Volume
Containers and packaging plastic successfully bid in 2014	100,000 tonnes
Used plastic reused in steelmaking process	130,000 tonnes
Used fluorescent tubes processed	20 million tubes
Used consumer appliances processed	550,000 units



Sendai
- Plastic packaging waste sorting and baling plant
- Plastic material recycling plant
- Fluorescent tube recycling plant
- Recycled pallet manufacturing plant
- Confidential document disposal plant
- RPF manufacturing plant

Toyama
- Rare metal recovery plant for spent catalysts

Kurashiki (Mizushima)
- Waste gasifying and melting furnace
- Waste wood carbonization plant
- Electric-furnace recycling plant

Chiba
- Waste gasifying and melting furnace
- Food waste recycling plant

Kawasaki
- Waste plastic recycling plant (Ogishima & Mizue)
- Waste PET bottle recycling plant
- Can and PET bottle sorting and baling plant
- Kiln-stoker incinerator
- Solid waste recycling plant
- NF Board® manufacturing plant
- Consumer/office appliance recycling plant

Yokohama
- Kiln-stoker incinerator
- Kiln-ash melting furnace
- Liquid/sludge waste intermediate treatment plant
- Solid waste recycling plant
- Fluorescent tube recycling plant
- Plastic packaging waste sorting and baling plant
- Dry cell and battery recycling plant

Fukuyama
- Waste plastic recycling plant
- RPF manufacturing plant
- Fukuyama plastic material recycling plant
- Fluorescent tube recycling plant
- Kiln incinerator
- Leachate-controlled landfill
- Liquid waste neutralization plant
- Refuse-derived fuel (RDF) gasifying power generation plant (commissioned operation)

JFE Group's Recycling Business List

JFE Group's Recycling Business List

District	Name of the Companies, Plants and Offices	Facilities	Address
Sendai	Shinko Recycle Corporation		
	Head Office Plant	Plastic packaging waste sorting and baling plant	1-20-5 Minato, Miyagino-ku, Sendai-shi, Miyagi
		Plastic material recycling plant	Same as above
		Fluorescent tube recycling plant	Same as above
		Recycled pallet manufacturing plant	Same as above
		Confidential document disposal plant	Same as above
	Rifu Plant	RPF manufacturing plant	6-5-14 Shirakashi-dai, Rifu-cho, Miyagi
Chiba	Japan Recycling Corporation Co., Ltd.		
	Chiba Biogas Center	Waste gasifying and melting furnace	1 Kawasaki-cho, Chuo-ku, Chiba-shi, Chiba
	Chiba Recycle Center	Food waste recycling plant	Same as above
Kawasaki	JFE Kankyo Corporation		
	Ohgishima Raw Materials Plant	Waste plastic recycling plant	10 Ohgishima, Kawasaki-ku, Kawasaki-shi, Kanagawa
	Kawasaki PET Bottle Recycling Plant	Waste PET bottle recycling plant	699-38 Mizue-cho, Kawasaki-ku, Kawasaki-shi, Kanagawa
	Kawasaki Can and PET Bottle Baling Plant	Can and PET bottle sorting and bailing plant	699-58 Mizue-cho, Kawasaki-ku, Kawasaki-shi, Kanagawa
	Kawasaki Eco Clean (Incinerator)	Kiln-stoker type incinerator	5-73 Ohgi-machi, Kawasaki-ku, Kawasaki-shi, Kanagawa, and others
		Solid waste recycling plant	Same as above
	JFE Plastic Resource Corporation		
	Mizue recycling plant	Waste plastic recycling plant	679-23 Mizue-cho, Kawasaki-ku, Kawasaki-shi, Kanagawa, and others
	NF Board® plant	NF Board® manufacturing plant	5-1 Mizue-cho, Kawasaki-ku, Kawasaki-shi, Kanagawa
	JFE Urban Recycle Corporation		
	Home appliance recycling plant	Consumer appliance/OA recycling plant	6-1 Mizue-cho, Kawasaki-ku, Kawasaki-shi, Kanagawa
Yokohama	JFE Kankyo Corporation		
	Yokohama Eco Clean (Incinerator)	Kiln-stoker type incinerator	2-1 Suehiro-cho, Tsurumi-ku, Yokohama-shi, Kanagawa, and others
		Kiln type ash melting furnace	Same as above
	Chemical Plant	Liquid/sludge waste intermediate treatment plant	3-1 Benten-cho, Tsurumi-ku, Yokohama-shi, Kanagawa
	Yokohama Clean Resource Recycling Plant	Solid waste recycling plant	2-1-5 Suehiro-cho, Tsurumi-ku, Yokohama-shi, Kanagawa
	Fluorescent Lamp/Battery Recycling Plant	Fluorescent tube recycling plant	2-1-8 Suehiro-cho, Tsurumi-ku, Yokohama-shi, Kanagawa
	Yokohama Plastics Recycling Plant	Plastic packaging waste sorting and baling plant	2-1-8 Suehiro-cho, Tsurumi-ku, Yokohama-shi, Kanagawa
	Suehiro Plant	Dry cell and battery recycling plant	2-1-8 Suehiro-cho, Tsurumi-ku, Yokohama-shi, Kanagawa
	JFE Kankyo Logitech Corporation		
	Kanazawa Recycling Center	Solid waste recycling plant	1-14-5 Fukuura, Kanazawa-ku, Yokohama-shi, Kanagawa
Kurashiki (Mizushima)	Mizushima Eco-Works Co., Ltd.	Waste gasifying and melting furnace	1-14-5 Mizushimakawasaki-dori, Kurashiki-shi, Okayama
	Recycling Management Japan, Inc.		
	Okayama Wood Carbonization Facilities	Waste wood carbonization plant	1-14-1 Mizushimakawasaki-dori, Kurashiki-shi, Okayama
	JFE Bars & Shaps Corporation		
	DC electric arc furnace	Electric-furnace recycling plant	1-5-2 Mizushimakawasaki-dori, Kurashiki-shi, Okayama, and others
Fukuyama	JFE Plastic Resource Corporation		
	Fukuyama recycling plant	Waste plastic recycling plant	113 Minoki-cho, Fukuyama-shi, Hiroshima, and others
	JFE Kankyo Corporation		
	Fukuyama RPF Production Plant	RPF manufacturing plant	115-1 Minoki-cho, Fukuyama-shi, Hiroshima
	Fukuyama Plastic Material Recycling Plant	Plastic materials recycling plant	Same as above
	Fukuyama Fluorescent Lamp Recycling Plant	Fluorescent tube recycling plant	Same as above
	Fukuyama Incinerator	Kiln type incinerator	1 Kokan-cho, Fukuyama-shi, Hiroshima
		Leachate controlled landfill	Same as above
		Liquid waste neutralization plant	Same as above
	Fukuyama Recycle Power Corporation	Refuse-derived fuel (RDF) gasifying power generation plant (commissioned operation)	107-8 Minoki-cho, Fukuyama-shi, Hiroshima
Toyama	JFE Material Co., Ltd.	Rare metal recovery plant for spent catalysts	2-9-38 Shosei-machi, Imizu-shi, Toyama

Main Environmental Targets and Results

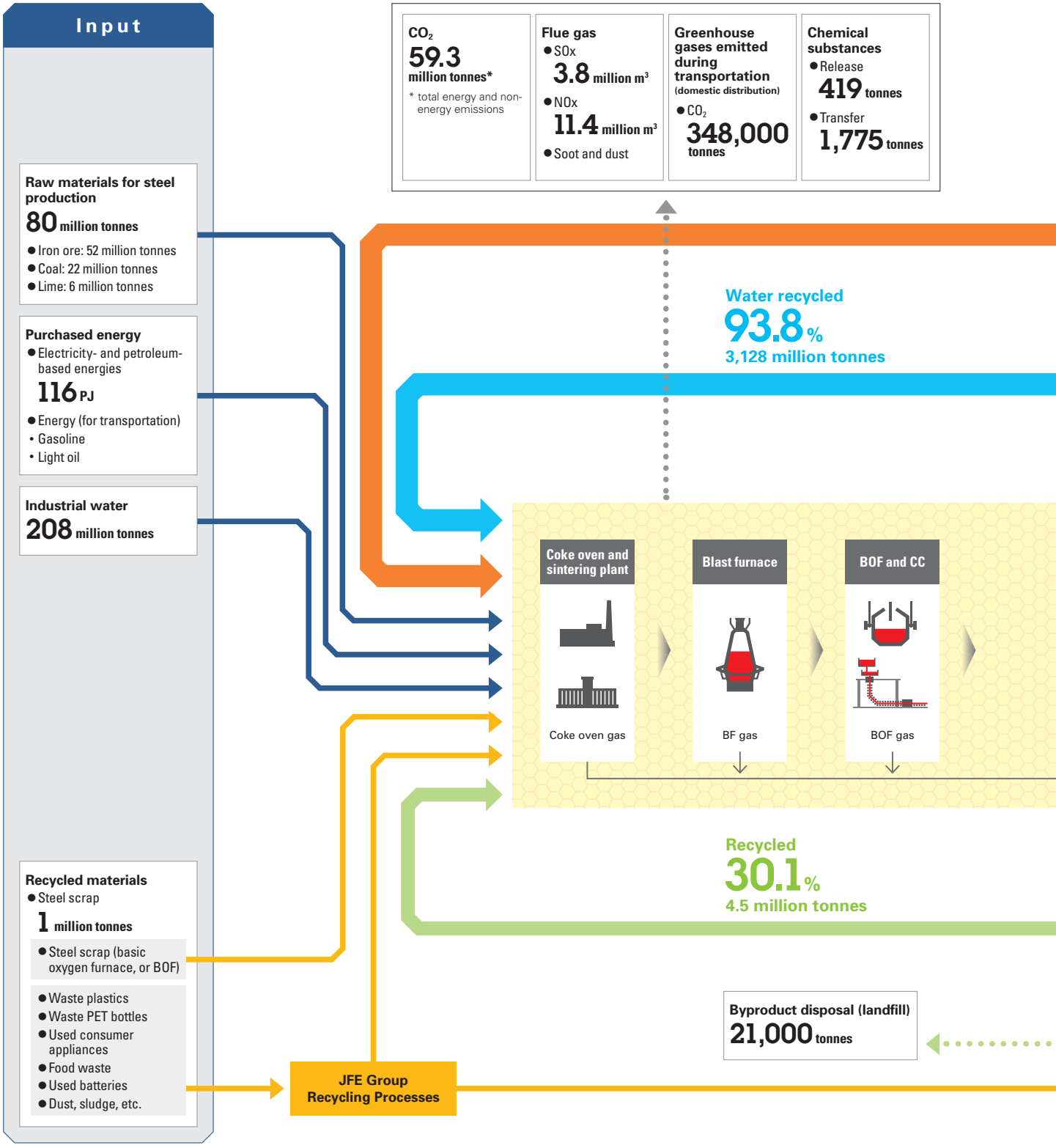
		FY2013 Targets
Management	JFE Steel	• Continue to improve environmental management systems, including in Group companies
		• Voluntary activities for environmental preservation
	JFE Engineering	• Enhancement of Group-wide compliance
	JFE Shoji Trade	• Enhancement of Group-wide compliance
Global Warming Prevention	JFE Steel	• Following completion of Japan Iron and Steel Federation's Voluntary Action Program, continue global-warming measures to help meet Low-Carbon Society Action Plan targets (set by Japan Iron and Steel Federation), including cutting CO_2 emissions by five million tonnes in 2020 compared to business as usual
	JFE Engineering	• Achieve results equivalent to or exceeding voluntary action plan targets of Japan Society of Industrial Machinery Manufacturers
	JFE Shoji Trade	• Reduce electricity consumption • Reduce copy paper usage
Pollution Prevention	JFE Steel	• Cut dioxin emissions to less than 5.5 g-TEQ per year on average in FY2012 – FY2016 under new national reduction plan
Resource Recycling	JFE Steel	• Reduce dust and sludge and promote recycling
		• Conduct waste-related education in response to revised data sheet on waste
	JFE Engineering	At construction sites: • Recycle at least 99.5% of rubble • Recycle at least 95.0% of sludge • Recycle at least 85.0% of industrial wastes (excluding rubble and sludge)
Products and Services	JFE Engineering	• Establish targets and implement environmentally friendly initiatives in R&D, planning and design sections of each division

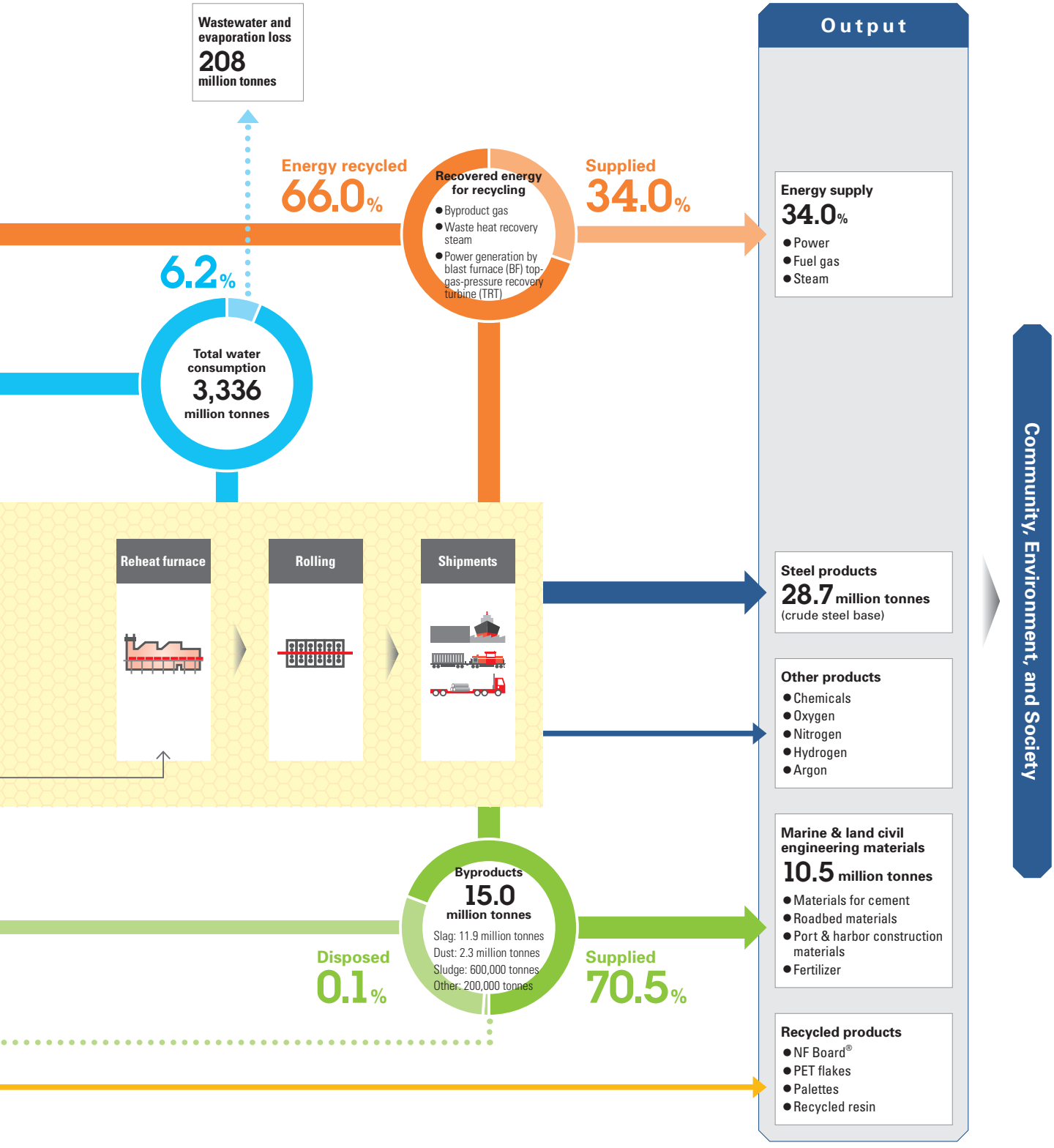
○: Target exceeded △: Target achieved ×: Target not achieved

	FY2013 Results	Evaluation	FY2014 Targets
	• Group Liaison Committee met twice to discuss environmental laws • Uniformly confirmed and followed up on legal compliance	○	• Continue to improve environmental management systems, including in Group companies
	• Conducted environmental management training for new managers (three times for 62 participants) • Conducted environmental auditing at 33 workplaces	○	• Voluntary activities for environmental preservation
	• Conducted environmental inspections at all construction sites • Conducted group-wide environmental compliance audit	○	• Enhancement of Group-wide compliance
	• Self-confirmed legal compliance • Conducted environmental audit of group companies	○	• Continue to self-confirm legal compliance
	• Implemented Eco-Processes, Eco-Solutions, Eco-Products ("Three Ecos") initiative and COURSE 50 program for developing innovative steelmaking processes	○	• Maintain Eco-Processes, Eco-Solutions, Eco-Products ("Three Ecos") initiative and COURSE 50 program for developing innovative steelmaking processes
	• Achieved average decrease of 14.9% between FY2008 and FY2012 compared to FY1997 • FY2013 emissions: 13,300 tonnes	○	• Achieve results equivalent to or exceeding voluntary action plan targets of Japan Society of Industrial Machinery Manufacturers
	• Reduced electricity consumption by 48% compared to FY2001 • Reduced copy paper usage by 0.8% compared to FY2001	○	• Maintain measures for reducing electricity consumption • Maintain measures for reducing copy paper usage
	• Achieved emissions below 6.6 g-TEQ per year (five-year average)	—	• Cut dioxin emissions to less than 5.5 g-TEQ per year on average between FY2012 and FY2016 under new national reduction plan
	• Kurashiki: Reduced waste by 800 tonnes by turning oil-containing sludge into a valuable resource • Chiba: Installed sludge recycling equipment	○	• Reduce dust and sludge and promote recycling efforts
	• Conducted training using data sheet on waste (2nd edition)	○	—
	• Recycled 99.9% of rubble • Recycled 99.2% of sludge • Recycled 96.2% of industrial wastes (excluding rubble and sludge)	○	Pursue targets for construction sites and add targets modified for each division: • Recycle at least 99.5% of rubble • Recycle at least 95.0% of sludge • Recycle at least 85.0% of industrial wastes (excluding rubble and sludge)
	• Achieved 59 targets established company-wide	○	• Establish targets and implement environmentally friendly initiatives in R&D, planning and design sections of each division

JFE Steel

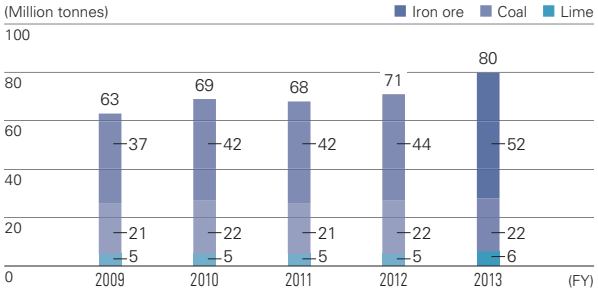
Materials Flow



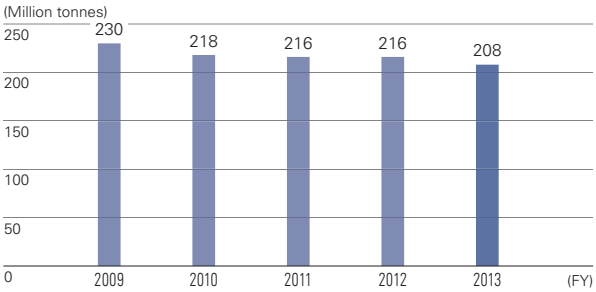

Wastewater and evaporation loss
208
million tonnes
Energy recycled
66.0%
Recovered energy for recycling
Byproduct gas
Waste heat recovery steam
Power generation by blast furnace (BF) top-gas-pressure recovery turbine (TRT)
Supplied
34.0%
6.2%
Total water consumption
3,336
million tonnes
Reheat furnace
Rolling
Shipments
Output
Energy supply
34.0%
Power
Fuel gas
Steam
Steel products
28.7 million tonnes
(crude steel base)
Other products
Chemicals
Oxygen
Nitrogen
Hydrogen
Argon
Marine & land civil engineering materials
10.5 million tonnes
Materials for cement
Roadbed materials
Port & harbor construction materials
Fertilizer
Recycled products
NF Board®
PET flakes
Palettes
Recycled resin
Byproducts
15.0
million tonnes
Slag: 11.9 million tonnes
Dust: 2.3 million tonnes
Sludge: 600,000 tonnes
Other: 200,000 tonnes
Disposed
0.1%
Supplied
70.5%
Community, Environment, and Society

Input Materials

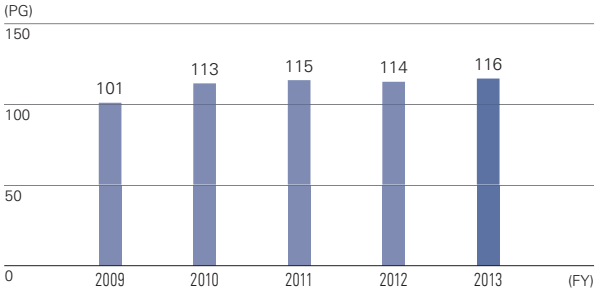
Materials for Steel Production



Industrial Water

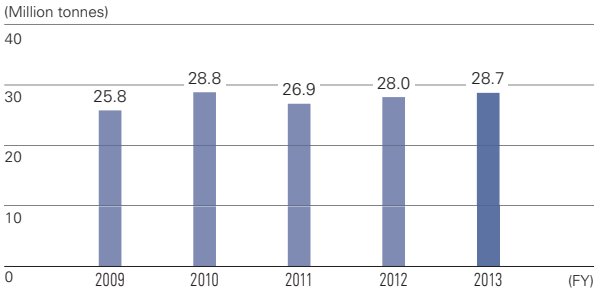


Purchased Energy (Electricity and Petroleum-based Energies)

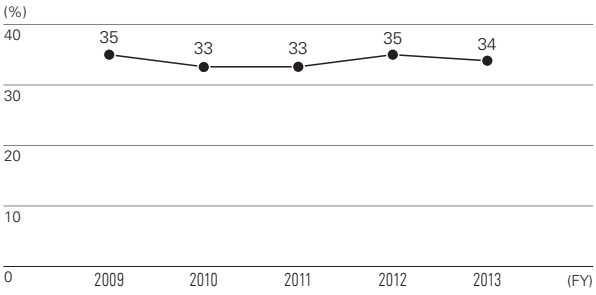


Output Products

Steel Products



Energy Supply Rate for Recovered Energy



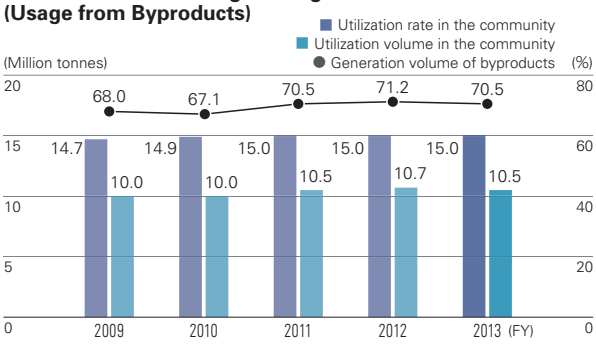
Byproducts

● NF Board® ● PET Flakes ● Pallet ● Recycled Resin

Other Products

● Chemicals ● Nitrogen ● Argon ● Oxygen ● Hydrogen

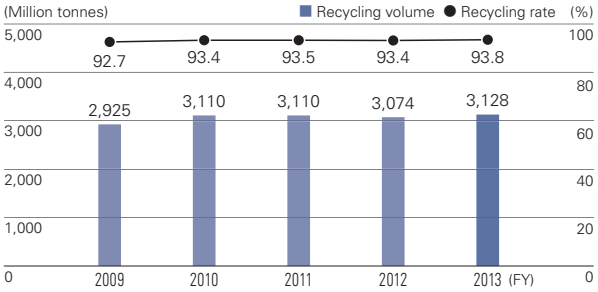
Marine & Land Civil Engineering Materials (Usage from Byproducts)



Note: Values for past fiscal years have been recalculated retroactively for improved accuracy.

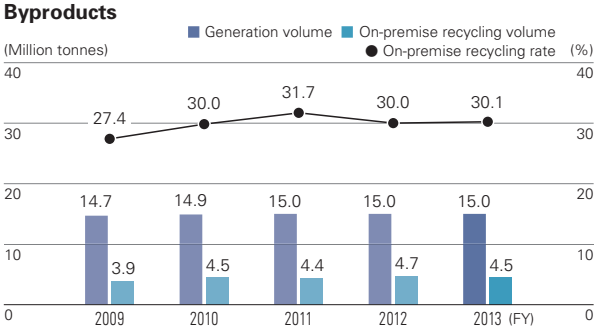
Recycled Resources

Recycled Water

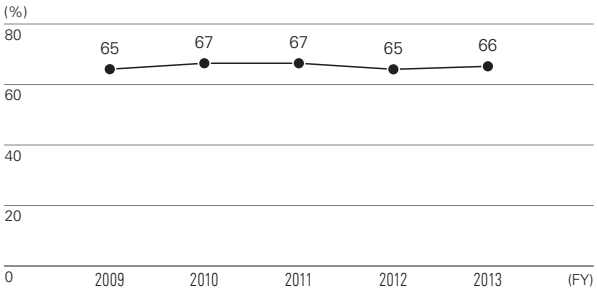


Note: Values for past fiscal years have been recalculated retroactively for improved accuracy.

Byproducts



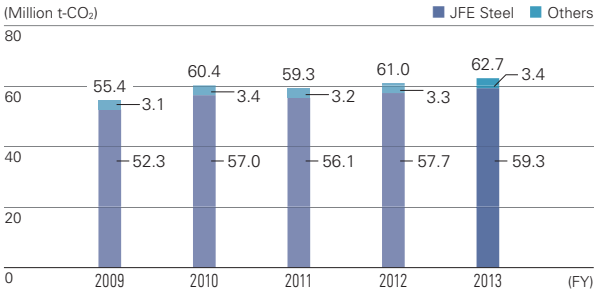
Recycling Rate for Recovered Energy



CO_2 Emissions and Energy Consumption

● Status of JFE Steel Group

CO_2 Emissions of JFE Steel Group



* Values cover JFE Steel (energy-derived and non-energy-derived emissions) and 35 major domestic affiliates (energy-derived emissions).

CO_2 Emissions of JFE Steel Group Subsidiaries (FY2013)

(t-CO_2)

Name of Company	CO_2 Emissions
JFE Bars & Shapes Corp.	1,373,784
Mizushima Ferroalloy Co., Ltd.	616,791
JFE Chemical Corp.	615,410
JFE Mineral Company, Ltd.	406,905
JFE Galvanizing & Coating Co., Ltd.	94,914
JFE Material Co., Ltd.	66,102
JFE Pipe Fitting Mfg. Co., Ltd.	24,548
JFE Plastic Resource Corporation	21,994
JFE Logistics Corporation	17,074
Galvatex Corp.	14,526
Mizushima Riverment Corp.	11,763
JFE Metal Products & Engineering Inc.	11,592
JFE Container Co., Ltd.	11,384
JFE Techno-Wire Corp.	10,559
Chiba Riverment and Cement Corp.	10,094
JFE Life Corp.	8,720
JFE Precision Co., Ltd.	7,402
JFE Welded Pipe Manufacturing Co., Ltd.	6,885
JFE Mechanical Co., Ltd.	5,584
JFE Steel Pipe Co., Ltd.	4,501
JFE Electrical Steel Co., Ltd.	4,007
JFE Kozai Corp.	3,672
13 other companies (excluded from the scope of regular reporting required by the Energy Saving Act)	18,262
Total	3,366,474

Energy Consumption of JFE Steel Group Subsidiaries (FY2013)

(GJ)

Name of Company	CO_2 Emissions
JFE Bars & Shapes Corp.	24,394,746
JFE Chemical Corp.	11,889,321
JFE Mineral Company, Ltd.	6,847,799
Mizushima Ferroalloy Co., Ltd.	6,221,101
JFE Galvanizing & Coating Co., Ltd.	1,951,970
JFE Material Co., Ltd.	1,158,786
JFE Pipe Fitting Mfg. Co., Ltd.	449,966
JFE Plastic Resource Corporation	400,754
Galvatex Corporation	282,948
JFE Logistics Corp.	264,634
JFE Container Co., Ltd.	215,762
JFE Metal Products & Engineering Inc.	213,733
JFE Techno-Wire Corp.	196,732
Mizushima Riverment Corp.	185,150
Chiba Riverment and Cement Corp.	179,800
JFE Life Corp.	155,408
JFE Precision Co., Ltd.	134,645
JFE Welded Pipe Manufacturing Co., Ltd.	124,165
JFE Mechanical Co., Ltd.	94,687
JFE Steel Pipe Co., Ltd.	80,880
JFE Electrical Steel Co., Ltd.	72,509
JFE Kozai Corp.	66,035
13 other companies (excluded from the scope of regular reporting required by the Energy Saving Act)	324,338
Total	55,905,872

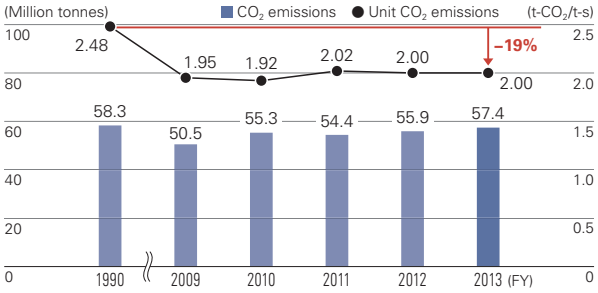
* The total does not add up due to rounding.

CO_2 Emission Factor for Purchased Energy
- JFE Steel uses the emission factor of the Japan Iron and Steel Federation's Voluntary Action Plan. Note that values for FY2012 were used for FY2013.
- With the exception of JFE Steel, companies use the CO_2 equivalent of 0.000550 (t-CO_2/kWh) for the FY2012 unadjusted emission factors of each electric power company.

CO_2 Emissions and Energy Consumption

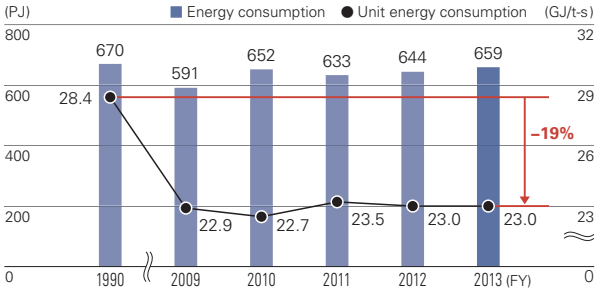
Status of JFE Steel

Energy-derived CO_2 Emissions and Unit CO_2 Emissions



* Values for past fiscal years were recalculated retroactively in line with a change in the definition of electricity emission factors (based on the reception of electric power instead of transmission) in 2013.
* Calculations were based on the premise that the CO_2 emission factor for FY2013 was the same as that for FY2012.

Energy Consumption and Unit Energy Consumption



* Values for past fiscal years were recalculated retroactively in line with a change in the definition of energy coefficient for electricity (based on the reception of electric power instead of transmission) in 2013.

Changes in Unit CO_2 Emissions and Crude Steel Production vs. FY1990

(%)

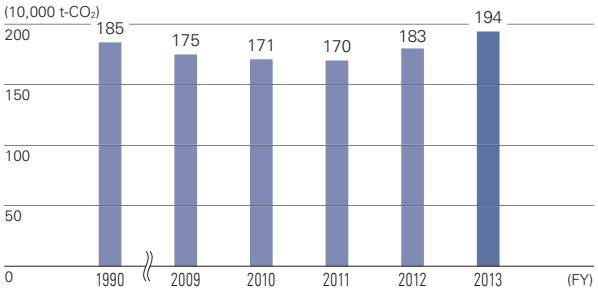
	2009	2010	2011	2012	2013
Unit Emissions	–21	–22	–20	–21	–19
Crude Steel Production	10	22	14	19	22

Changes in Unit Energy Consumption and Crude Steel Production vs. FY1990

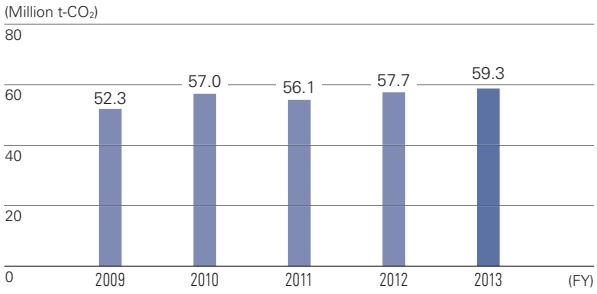
(%)

	2009	2010	2011	2012	2013
Unit Emissions	–20	–20	–17	–19	–19
Crude Steel Production	10	22	14	19	22

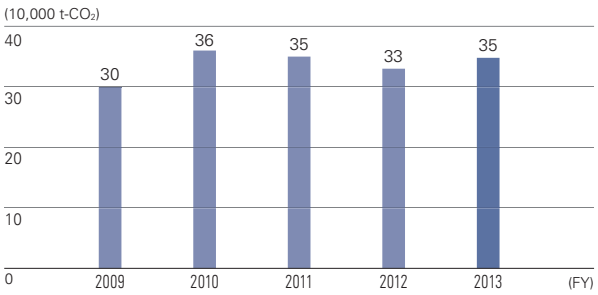
JFE Steel's Estimated Non-energy-related CO_2 Emissions



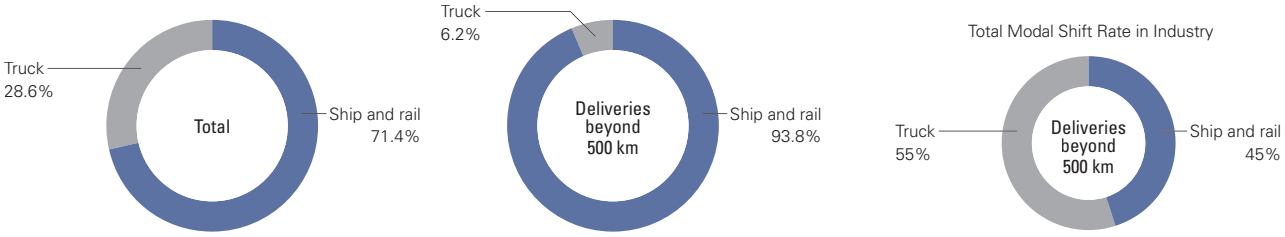
Total CO_2 Emissions (Energy-related and Non-energy-related)



Greenhouse Gas Emitted During Transportation



Modal Shift Rate (FY2013)

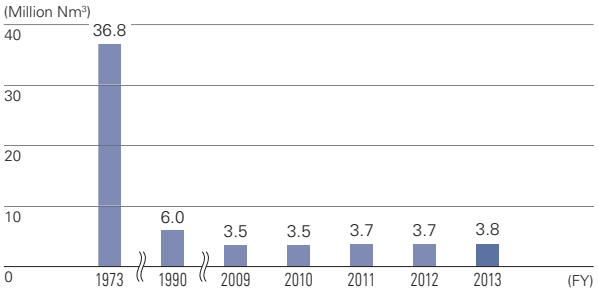


Source: Ministry of Land, Infrastructure, Transport and Tourism

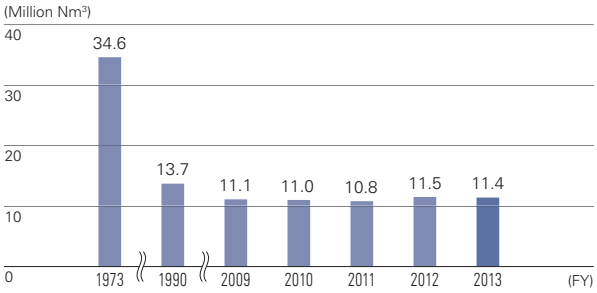
Disposed Substances

Atmospheric Emissions

SOx Emissions

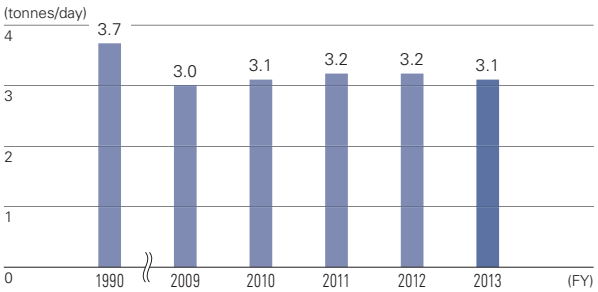


NOx Emissions

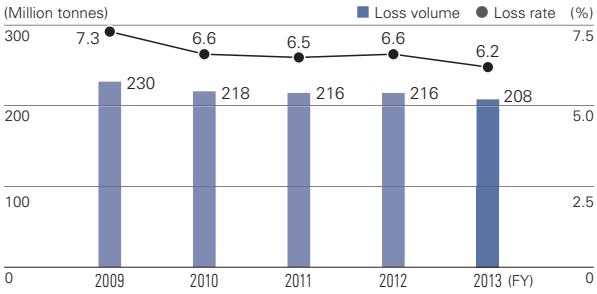


Discharge into Waterways

Changes in Chemical Oxygen Demand (COD)

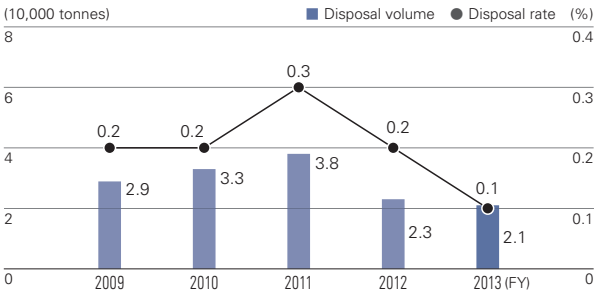


Wastewater and Evaporation Loss



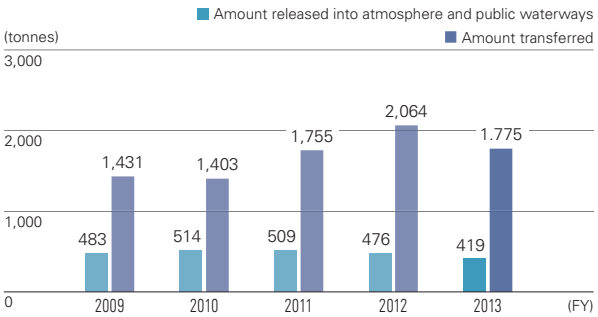
Byproducts Disposal

Byproducts Disposal



Management of Chemical Substances

Release or Transfer of PRTR-registered Substances



Substances Reported under PRTR (all Companies)

(tonnes/year, dioxins: g-TEQ/year)

Substance No.	Substance	Volume Released				Volume Transferred	
		Air	Water Area	Soil	On-premise Landfill	Sewer	Off-premise
1	Zinc compounds (water-soluble)	0	6.257	0	0	0	0
15	Acenaphthene	0	0	0	0	0	0
20	2-aminoethanol	0	0.49	0	0	0	2.3
31	Antimony and its compounds	0	0.49	0	0	0	16.009
32	Anthracene	0	0	0	0	0	0
33	Asbestos	0	0	0	0	0	0
53	Ethylbenzene	27.2	0	0	0	0	7.5
71	Ferric chloride	0	0	0	0	0	0
80	Xylene	117.9	0	0	0	0	9.2
83	Cumene	0.22	0	0	0	0	0
87	Chromium and chromium(III) compounds	0.0325	0.814	0	0	0	591.22
88	Chromium(VI) compounds	0.0003	0.13	0	0	0	0.66
132	Cobalt and its compounds	0	0	0	0	0	0.0044
185	Dichloropentafluoropropane; HCFC-225	47.8	0	0	0	0	0
186	Dichloromethane; methylene dichloride	14.5	0	0	0	0	0
188	N,N-dicyclohexylamine	0	0	0	0	0	2.7
240	Styrene	0.26	0	0	0	0	0
242	Selenium and its compounds	0	0.058	0	0	0	2.5
243	Dioxins	6.54	0	0	0	0	0
262	Tetrachloroethylene	21.1	0	0	0	0	0
272	Copper salts (water-soluble, except complex salts)	0	0.018	0	0	0	0
292	Tributylamine	0	0	0	0	0	0
296	1,2,4-trimethylbenzene	3.23	0	0	0	0	0.088
297	1,3,5-trimethylbenzene	6.1	0	0	0	0	0
300	Toluene	75.63	0	0	0	0	0.959
302	Naphthalene	1.7	0	0	0	0	0.18
304	Lead	0	0	0	0	0	0
305	Lead compounds	0	0.013	0	0	0	150
308	Nickel	0	0	0	0	0	49
309	Nickel compounds	0.0095	2.51	0	0	0	39.1
321	Vanadium compounds	0	0	0	0	0	16
333	Hydrazine	0	0	0	0	0	0
340	Biphenyl	0	0	0	0	0	0
349	Phenol	1.4	0	0	0	0	0.0002
374	Hydrogen fluoride and its water-soluble salts	0	26.2	0	0	0	30
384	1-bromopropane	1.7	0	0	0	0	0
392	N-hexane	0.0052	0	0	0	0	0
400	Benzene	19.1	0	0	0	0	0
405	Boron compounds	0	21.7	0	0	0	3.66
406	Polychlorinated biphenyls; PCBs	0	0	0	0	0	0
407	Poly(oxyethylene) alkyl ether (alkyl C=12-15)	0	0	0	0	0	1.7
410	Poly(oxyethylene) nonylphenyl ether	0	0	0	0	0	0
411	Formaldehyde	0	0	0	0	0	0
412	Manganese and its compounds	0.043	17.37	0	0	0	624
438	Methylnaphthalene	0	0	0	0	0	0
448	Methylenebis(4,1-phenylene) diisocyanate	0	0	0	0	0	0
453	Molybdenum and its compounds	0.0014	5.44	0	0	0	226.35
460	Tritolyl phosphate	0	0	0	0	0	0
461	Triphenyl phosphate	0	0	0	0	0	1.4
Subtotal		**338**	**81**	**0**	**0**	**0**	**1,775**
Total		419				1,775	

Substances Reported under PRTR (East Japan Works) Chiba District

(tonnes/year, dioxins: g-TEQ/year)

Substance No.	Substance	Volume Released				Volume Transferred	
		Air	Water Area	Soil	On-premise Landfill	Sewer	Off-premise
1	Zinc compounds (water-soluble)	0	0.14	0	0	0	0
20	2-aminoethanol	0	0.49	0	0	0	0
31	Antimony and its compounds	0	0	0	0	0	0
53	Ethylbenzene	0.8	0	0	0	0	0
71	Ferric chloride	0	0	0	0	0	0
80	Xylene	1.7	0	0	0	0	0
87	Chromium and chromium(III) compounds	0.0046	0.73	0	0	0	530
88	Chromium(VI) compounds	0	0.13	0	0	0	0
132	Cobalt and its compounds	0	0	0	0	0	0
185	Dichloropentafluoropropane; HCFC-225	46	0	0	0	0	0
243	Dioxins	0.14	0	0	0	0	0
272	Copper salts (water-soluble, except complex salts)	0	0.018	0	0	0	0
297	1,3,5-trimethylbenzene	0	0	0	0	0	0
300	Toluene	0.53	0	0	0	0	0
308	Nickel	0	0	0	0	0	49
309	Nickel compounds	0.0022	1.7	0	0	0	0
321	Vanadium compounds	0	0	0	0	0	0
333	Hydrazine	0	0	0	0	0	0
349	Phenol	0	0	0	0	0	0
374	Hydrogen fluoride and its water-soluble salts	0	19	0	0	0	30
400	Benzene	1.3	0	0	0	0	0
405	Boron compounds	0	3.2	0	0	0	0.56
410	Poly(oxyethylene) nonylphenyl ether	0	0	0	0	0	0
412	Manganese and its compounds	0.01	0.32	0	0	0	130
453	Molybdenum and its compounds	0	2.5	0	0	0	4.8
Subtotal		50	28	0	0	0	744
Total		78				744	

Substances Reported under PRTR (East Japan Works) Nishinomiya District

(tonnes/year, dioxins: g-TEQ/year)

Substance No.	Substance	Volume Released				Volume Transferred	
		Air	Water Area	Soil	On-premise Landfill	Sewer	Off-premise
87	Chromium and chromium(III) compounds	0	0	0	0	0	0
Subtotal		0	0	0	0	0	0
Total		0				0	

Substances Reported under PRTR (Keihin District)

(tonnes/year, dioxins: g-TEQ/year)

Substance No.	Substance	Volume Released				Volume Transferred	
		Air	Water Area	Soil	On-premise Landfill	Sewer	Off-premise
20	2-aminoethanol	0	0	0	0	0	2.3
53	Ethylbenzene	2.1	0	0	0	0	1.3
80	Xylene	8.1	0	0	0	0	2.5
87	Chromium and chromium(III) compounds	0.018	0	0	0	0	11
88	Chromium(VI) compounds	0.0003	0	0	0	0	0.47
243	Dioxins	1.7	0	0	0	0	0
262	Tetrachloroethylene	0	0	0	0	0	0
297	1,3,5-trimethylbenzene	0	0	0	0	0	0
300	Toluene	8	0	0	0	0	0.9
308	Nickel	0	0	0	0	0	0
309	Nickel compounds	0.0023	0	0	0	0	2.9
333	Hydrazine	0	0	0	0	0	0
349	Phenol	1.4	0	0	0	0	0.0002
400	Benzene	5	0	0	0	0	0
405	Boron compounds	0	3.3	0	0	0	0
407	Poly(oxyethylene) alkyl ether (alkyl C=12-15)	0	0	0	0	0	1.7
412	Manganese and its compounds	0.01	0.53	0	0	0	210
453	Molybdenum and its compounds	0.0014	0.85	0	0	0	220
460	Tritolyl phosphate	0	0	0	0	0	0
461	Triphenyl phosphate	0	0	0	0	0	1.4
Subtotal		**25**	**5**	**0**	**0**	**0**	**452**
Total		30				452	

Substances Reported under PRTR (West Japan Works) Kurashiki District

(tonnes/year, dioxins: g-TEQ/year)

Substance No.	Substance	Volume Released				Volume Transferred	
		Air	Water Area	Soil	On-premise Landfill	Sewer	Off-premise
1	Zinc compounds (water-soluble)	0	2.3	0	0	0	0
20	2-aminoethanol	0	0	0	0	0	0
31	Antimony and its compounds	0	0.1	0	0	0	0.009
53	Ethylbenzene	4.4	0	0	0	0	0
71	Ferric chloride	0	0	0	0	0	0
80	Xylene	7.6	0	0	0	0	0
87	Chromium and chromium(III) compounds	0.0099	0	0	0	0	26
88	Chromium(VI) compounds	0	0	0	0	0	0.19
132	Cobalt and its compounds	0	0	0	0	0	0
185	Dichloropentafluoropropane; HCFC-225	1.8	0	0	0	0	0
186	Dichloromethane; methylene dichloride	2.5	0	0	0	0	0
242	Selenium and its compounds	0	0.058	0	0	0	2.5
243	Dioxins	1.4	0	0	0	0	0
258	1,3,5,7-tetraazatricyclo[3.3.1.13.7]decane; hexamethylenetetramine	0	0	0	0	0	0
262	Tetrachloroethylene	2.1	0	0	0	0	0
292	Tributylamine	0	0	0	0	0	0
296	1,2,4-trimethylbenzene	1.5	0	0	0	0	0
300	Toluene	30	0	0	0	0	0
302	Naphthalene	0	0	0	0	0	0
305	Lead	0	0	0	0	0	0
308	Lead compounds	0	0	0	0	0	0
309	Nickel	0.005	0	0	0	0	8.2
400	Nickel compounds	3	0	0	0	0	0
405	Benzene	0	9.2	0	0	0	1.5
406	Polychlorinated biphenyls; PCBs	0	0	0	0	0	0
410	Poly(oxyethylene) nonylphenyl ether	0	0	0	0	0	0
411	Formaldehyde	0	0	0	0	0	0
412	Manganese and its compounds	0.023	8.5	0	0	0	140
453	Molybdenum and its compounds	0	1.2	0	0	0	1.4
460	Tritolyl phosphate	0	0	0	0	0	0
Subtotal		53	21	0	0	0	180
Total		74				180	

Substances Reported under PRTR (West Japan Works) Konan District

(tonnes/year, dioxins: g-TEQ/year)

Substance No.	Substance	Volume Released				Volume Transferred	
		Air	Water Area	Soil	On-premise Landfill	Sewer	Off-premise
80	Xylene	1.5	0	0	0	0	0
300	Toluene	2.9	0	0	0	0	0
Subtotal		4	0	0	0	0	0
Total		4				0	

Substances Reported under PRTR (Fukuyama District)

(tonnes/year, dioxins: g-TEQ/year)

Substance No.	Substance	Volume Released				Volume Transferred	
		Air	Water Area	Soil	On-premise Landfill	Sewer	Off-premise
1	Zinc compounds (water-soluble)	0	3.8	0	0	0	0
15	Acenaphthene	0	0	0	0	0	0
20	2-aminoethanol	0	0	0	0	0	0
31	Antimony and its compounds	0	0.39	0	0	0	16
32	Anthracene	0	0	0	0	0	0
53	Ethylbenzene	12	0	0	0	0	6.2
71	Ferric chloride	0	0	0	0	0	0
80	Xylene	46	0	0	0	0	6.7
87	Chromium and chromium(III) compounds	0	0	0	0	0	24
88	Chromium(VI) compounds	0	0	0	0	0	0
104	Chlorodifluoromethane; HCFC-22	0	0	0	0	0	0
132	Cobalt and its compounds	0	0	0	0	0	0.0044
186	Dichloromethane; methylene dichloride	12	0	0	0	0	0
240	Styrene	0.26	0	0	0	0	0
243	Dioxins	3.3	0	0	0	0	0
262	Tetrachloroethylene	19	0	0	0	0	0
296	1,2,4-trimethylbenzene	1.6	0	0	0	0	0.088
300	Toluene	26	0	0	0	0	0.059
302	Naphthalene	1.7	0	0	0	0	0.18
305	Lead compounds	0	0.013	0	0	0	150
308	Nickel	0	0	0	0	0	0
309	Nickel compounds	0	0.81	0	0	0	23
321	Vanadium compounds	0	0	0	0	0	16
340	Biphenyl	0	0	0	0	0	0
374	Hydrogen fluoride and its water-soluble salts	0	7.2	0	0	0	0
400	Benzene	9.8	0	0	0	0	0
405	Boron compounds	0	2.2	0	0	0	1.6
411	Formaldehyde	0	0	0	0	0	0
412	Manganese and its compounds	0	7.9	0	0	0	120
438	Methylnaphthalene	0	0	0	0	0	0
453	Molybdenum and its compounds	0	0.63	0	0	0	0
460	Tritolyl phosphate	0	0	0	0	0	0
461	Triphenyl phosphate	0	0	0	0	0	0
Subtotal		**128**	**23**	**0**	**0**	**0**	**364**
Total		151				364	

Substances Reported under PRTR (Chita Works)

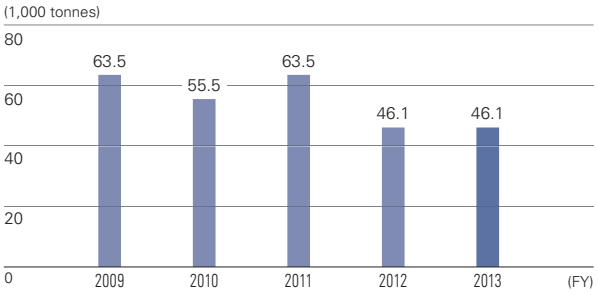
(tonnes/year, dioxins: g-TEQ/year)

Substance No.	Substance	Volume Released				Volume Transferred	
		Air	Water Area	Soil	On-premise Landfill	Sewer	Off-premise
1	Zinc compounds (water-soluble)	0	0.017	0	0	0	0
53	Ethylbenzene	7.9	0	0	0	0	0
80	Xylene	53	0	0	0	0	0
83	Cumene	0.22	0	0	0	0	0
87	Chromium and chromium(III) compounds	0	0.084	0	0	0	0.22
188	N,N-dicyclohexylamine	0	0	0	0	0	2.7
296	1,2,4-trimethylbenzene	0.13	0	0	0	0	0
297	1,3,5-trimethylbenzene	6.1	0	0	0	0	0
300	Toluene	8.2	0	0	0	0	0
305	Lead compounds	0	0	0	0	0	0
308	Nickel	0	0	0	0	0	0
309	Nickel compounds	0	0	0	0	0	5
384	1-bromopropane	1.7	0	0	0	0	0
392	N-hexane	0.0052	0	0	0	0	0
405	Boron compounds	0	3.8	0	0	0	0
412	Manganese and its compounds	0	0.12	0	0	0	24
448	Methylenebis(4,1-phenylene) diisocyanate	0	0	0	0	0	0
453	Molybdenum and its compounds	0	0.26	0	0	0	0.15
Subtotal		**77**	**4**	**0**	**0**	**0**	**32**
Total		81				32	

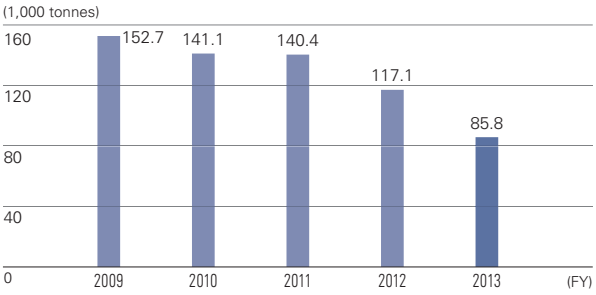
JFE Engineering

Input Materials

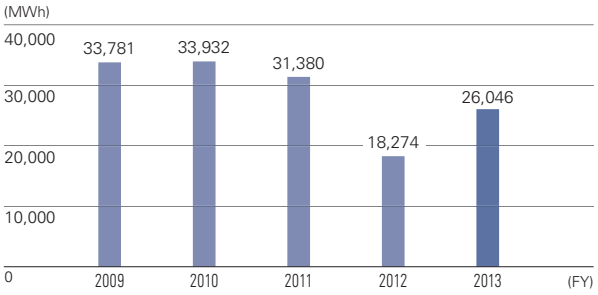
Raw Materials



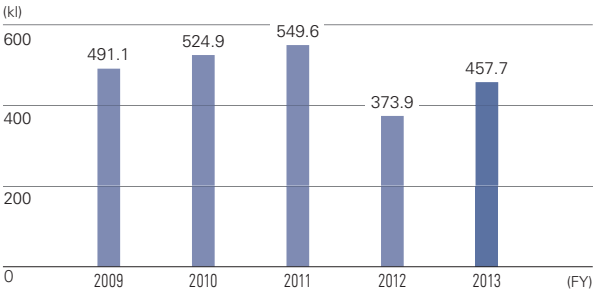
Water



Electricity

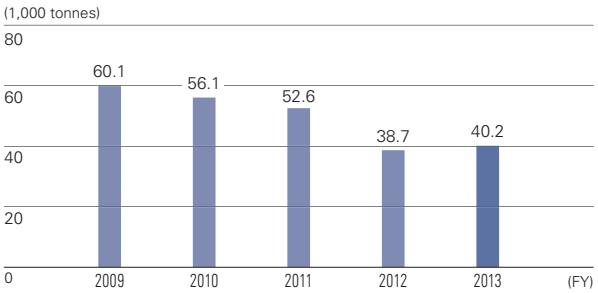


Heavy Oil, Kerosene, Light Oil and Gasoline



Output Products

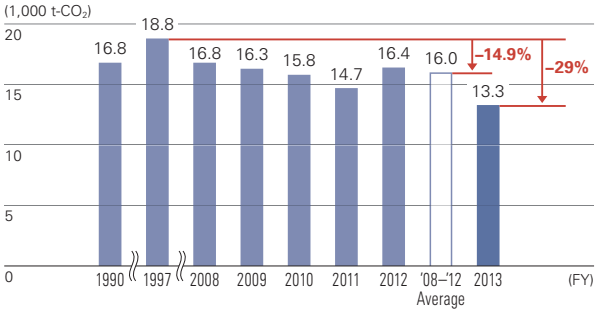
Products



CO_2 Emissions

Status on Non-consolidated Basis

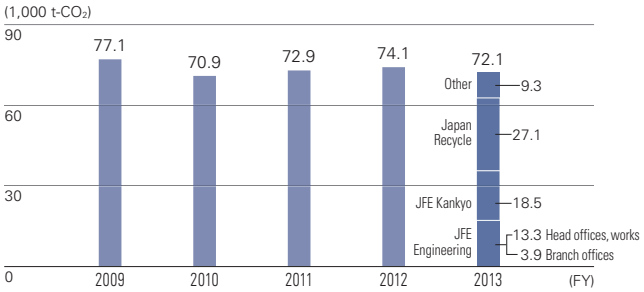
CO_2 Emissions (JFE Engineering Head Office and Works)



CO_2 emission factor for purchased electricity: unadjusted emission factors of each electric power company for each fiscal year.

Status as a Group

CO_2 Emissions of JFE Engineering Group



Note: The graph shows energy-derived CO_2 emissions for JFE Engineering and 11 major domestic affiliates.

CO_2 Emissions of JFE Engineering Group Companies (FY2013)

($t\text{-}CO_2$)

Name of Company	Emissions
Japan Recycling Corporation	27,095.3
JFE Kankyo Corporation	18,451.1
JFE Engineering Corporation	17,161.1
Fuji Kako Co., Ltd.	2,675.3
Recycling Management Japan, Inc.	1,583.6
JFE Urban Recycle Corporation	1,416.5
Tohoku Dock Tekko K.K.	1,174.5
Kitanippon Industrial Co., Ltd.	930.6
Asukasoken Co., Ltd.	747.0
Japan Pipeline Engineering Corporation	682.5
JFE Technos Corporation	100.4
Total	72,017.9

Energy Consumption of JFE Engineering Group Companies (FY2013)

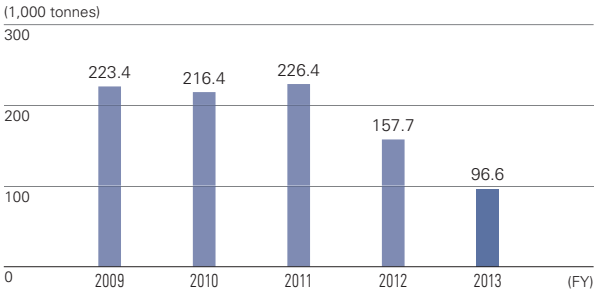
(GJ)

Name of Company	Energy Use
JFE Kankyo Corporation	3,549,541
JFE Engineering Corporation	3,236,510
Japan Recycling Corporation	507,454
Japan Pipeline Engineering Corporation	394,407
Fuji Kako Co., Ltd.	68,770
Recycling Management Japan, Inc.	52,993
JFE Technos Corporation	51,283
JFE Urban Recycle Corporation	37,744
Asukasoken Co., Ltd.	23,621
Kitanippon Industrial Co., Ltd.	20,265
Tohoku Dock Tekko K.K.	19,169
Total	7,961,757

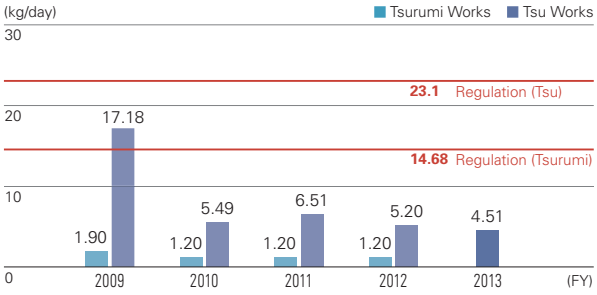
Disposed Substances

Release into Water Area

Wastewater



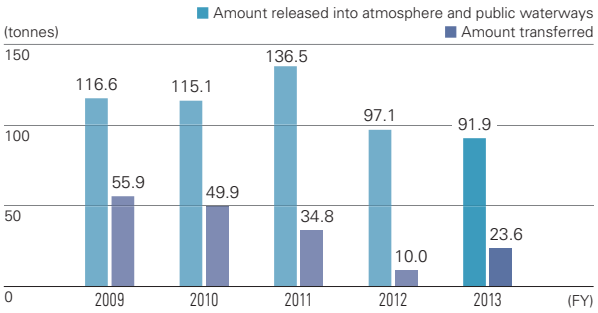
Chemical Oxygen Demand (COD) in Wastewater Released Publicly



Note: The Tsurumi Works was connected to the public sewer system in FY2013.

Management of Chemical Substances

Release and Transfer of PRTR-Registered Substance



Substances Reported under PRTR (all Companies)

(tonnes/year)

Substance No.	Substance	Volume Released				Volume Transferred	
		Air	Water Area	Soil	On-premise Landfill	Sewer	Off-premise
53	Ethylbenzene	16.2	0	0	0	0	0.9
80	Xylene	43.2	0	0	0	0	2.5
296	1,2,4-trimethylbenzene	0	0	0	0	0	0.2
300	Toluene	32.5	0	0	0	0	2.5
309	Nickel compounds	0	0	0	0	0	2.8
412	Manganese and its compounds	0	0	0	0	0	13.7
448	Methylenebis(4,1-phenylene) diisocyanate	0	0	0	0	0	1.1
Subtotal		**91.9**	**0**	**0**	**0**	**0**	**23.6**
		91.9				**23.6**	
Total		115.6					

* The total does not add up due to rounding.

Substances Reported under PRTR (Tsurumi Works)

(tonnes/year)

Substance No.	Substance	Volume Released				Volume Transferred	
		Air	Water Area	Soil	On-premise Landfill	Sewer	Off-premise
53	Ethylbenzene	1.0	0	0	0	0	0.1
80	Xylene	4.0	0	0	0	0	0.4
300	Toluene	18.0	0	0	0	0	1.7
448	Methylenebis(4,1-phenylene) diisocyanate	0	0	0	0	0	1.1
Subtotal		**23.0**	**0**	**0**	**0**	**0**	**3.3**
		23.0				**3.3**	
Total		26.3					

Substances Reported under PRTR (Tsu Works)

(tonnes/year)

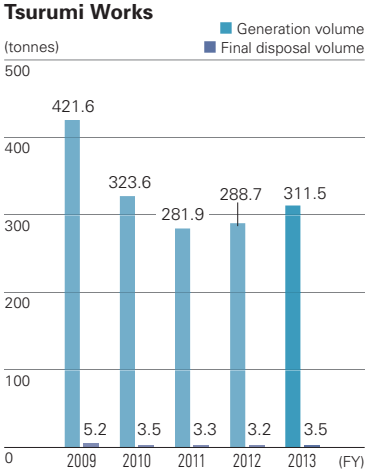
Substance No.	Substance	Volume Released				Volume Transferred	
		Air	Water Area	Soil	On-premise Landfill	Sewer	Off-premise
53	Ethylbenzene	15.2	0	0	0	0	0.8
80	Xylene	39.2	0	0	0	0	2.1
296	1,2,4-trimethylbenzene	0.0	0	0	0	0	0.2
300	Toluene	14.5	0	0	0	0	0.8
309	Nickel compounds	0	0	0	0	0	2.8
412	Manganese and its compounds	0	0	0	0	0	13.7
Subtotal		**68.9**	**0**	**0**	**0**	**0**	**20.3**
		68.9				**20.3**	
Total		89.3					

* The total does not add up due to rounding.

Waste Disposal in Each Section and Works

● Offices

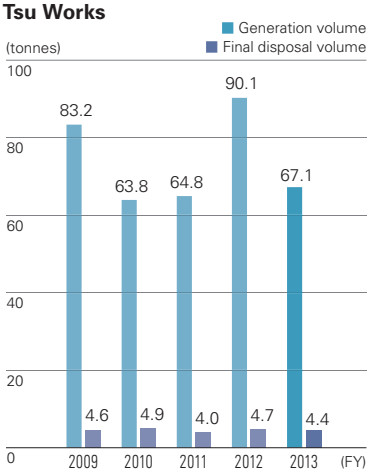
Tsurumi Works



(%)

	2009	2010	2011	2012	2013
Recycling rate (target)	97.0	98.0	98.0	98.0	98.0
Recycling rate (result)	98.7	98.8	98.8	98.8	98.8

Tsu Works

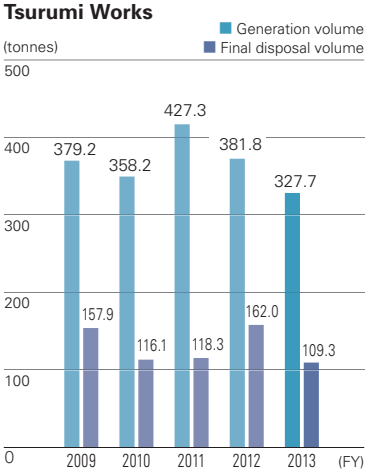


(%)

	2009	2010	2011	2012	2013
Recycling rate (target)	82.0	83.0	90.0	91.0	92.0
Recycling rate (result)	85.8	84.9	90.0	92.1	88.1

● Plants

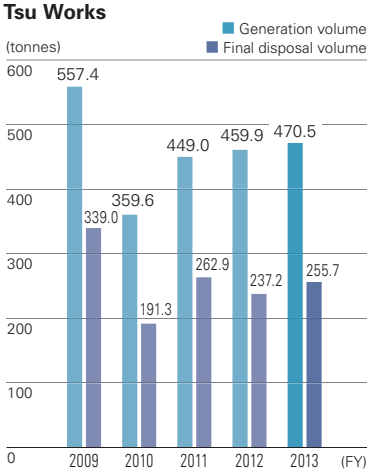
Tsurumi Works



(%)

	2009	2010	2011	2012	2013
Recycling rate (target)	52.0	54.0	54.0	55.0	56.0
Recycling rate (result)	47.4	53.0	60.8	41.4	53.6

Tsu Works

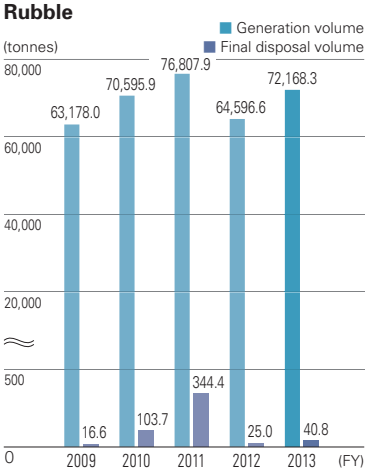


(%)

	2009	2010	2011	2012	2013
Recycling rate (target)	29.0	25.0	31.0	29.0	30.0
Recycling rate (result)	22.2	30.2	25.5	32.0	30.1

● Construction Sites

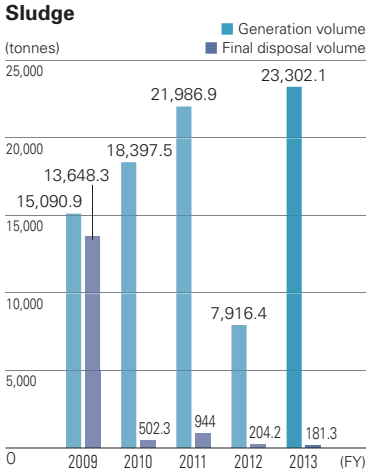
Rubble



(%)

	2009	2010	2011	2012	2013
Recycling rate (target)	99.5	99.5	99.5	99.5	99.5
Recycling rate (result)	100	99.9	99.6	100	99.9

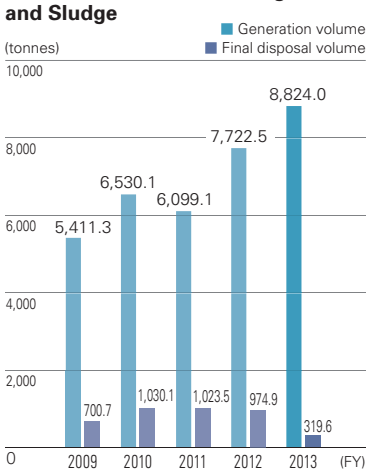
Sludge



(%)

	2009	2010	2011	2012	2013
Recycling rate (target)	75.0	75.0	95.0	95.0	95.0
Recycling rate (result)	14.1	97.1	95.6	97.4	99.2

Industrial Wastes, Excluding Rubble and Sludge



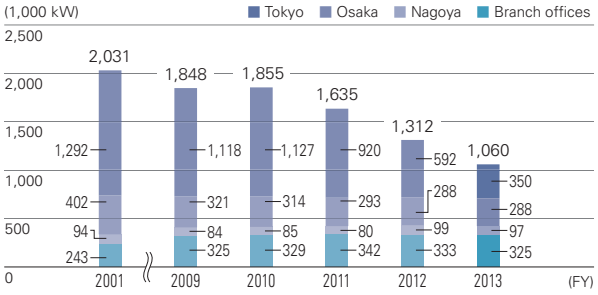
(%)

	2009	2010	2011	2012	2013
Recycling rate (target)	74.0	80.0	85.0	85.0	85.0
Recycling rate (result)	86.2	83.0	82.9	87.1	96.2

JFE Shoji Trade

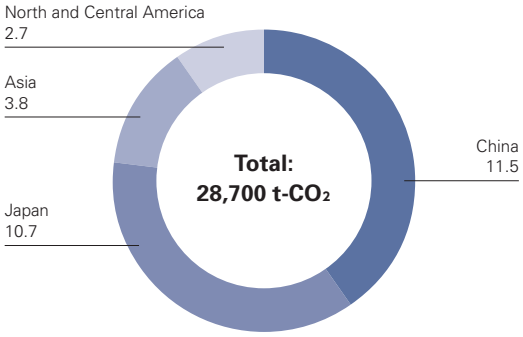
Electricity Consumption and CO_2 Emissions

Electric Power Consumption by JFE Shoji Trade



CO_2 emission factor for purchased energy:
CO_2 equivalent of 0.000550 (t-CO_2/kWh) for the FY2012 unadjusted emission factors of each electric power company.

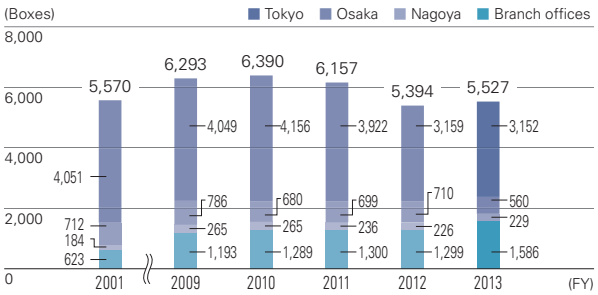
CO_2 Emissions of JFE Shoji Trade Group



Note: The graph shows CO_2 emissions from the electric power consumption of 30 companies including JFE Shoji Trade and major domestic consolidated subsidiaries (steel processing companies).

Input Materials

Paper Used by JFE Shoji Trade (Copier Papers)



Comparison with Environmental Reporting Guidelines 2012 (Ministry of the Environment, Japan)

Report Parameters and Summary						
Item	CSR Report					Environmental Data Book Pages
	Pages	Content	JFE Steel	JFE Engineering	JFE Shoji Trade	
1. Report Profile						
(1) Report boundary and reporting period	1	Editorial Policy	○	○	○	1
(2) Organizations coverage ratio and reporting period difference	1	Editorial Policy	○	○	○	—
(3) Reporting policies	1	Editorial Policy	○	○	○	—
	60–62	GRI Content Index	○	○	○	—
(4) Policies for selecting a type of report	1	Editorial Policy	○	○	○	—
	Back cover	Contact information	○	○	○	—
2. Chairman's statement/CEO's statement	3–4	Message from the CEO	○	○	○	—
3. Summary						
(1) Overview of environmentally focused management	5–6	JFE in Society	○	○	○	2
(2) Overview of KPI trends	—	—				—
(3) Summary of activities to address an individual environmental issue	29–30	Main Environmental Targets and Results	○	○	○	7–8
4. Material Balance						
	31–32	Materials Flow	○	○		9–10

Information and Indicators on How Environmentally Focused Management Including Environmental Management is Working						
Item	CSR Report					Environmental Data Book Pages
	Pages	Content	JFE Steel	JFE Engineering	JFE Shoji Trade	
1. Environmental Policies, Visions and Business Strategies						
(1) Environmental policies	2	Standards of Business Conduct	○	○	○	—
	25	Environmental Philosophy and Policy	○	○	○	—
(2) Material issues, visions and business strategies	3–4	Message from the CEO	○	○	○	—
	28	Environmental Risks and Opportunities	○	○	○	—
2. Organizational Systems and Governance						
(1) Organizational systems for environmentally focused management	25–26	Environmental Management	○	○	○	3
	64	Third Party Comments	○	○	○	—
(2) Environmental risk management system	25–26	Environmental Management	○	○	○	—
(3) Compliance with environmental regulations	26	Environmental Auditing	○	○	○	—
	38–39	Protecting the Environment	○	○		—
3. Responsiveness of Stakeholder Issues						
(1) Responsiveness to stakeholder issues	25	Environmental Philosophy and Strategies	○	○	○	—
	28	Environmental Risks and Opportunities	○	○	○	—
(2) Philanthropy related to the environment	35–36	Initiatives by the Japanese Steel Industry	○			—
	45	Environment-related Communication with Society	○	○	○	—
4. Environmental Initiatives in the Value Chain						
(1) Strategies and environmental policies in the value chain	28	Value Chain Initiatives	○	○	○	—
	28	Environmental Risks and Opportunities	○	○	○	—
	34	CO_2 Reduction in Value Chain	○	○		13
(2) Green purchasing and procurement	28	Value Chain Initiatives	○	○	○	—
(3) Products and services designed for mitigating environmental impacts	10–12	Reducing Environmental Loads with the World's Most Innovative Technology	○	○	○	—
	34	CO_2 Reduction in Value Chain	○			13
	40–41	Resource Recycling	○	○	○	5–6
	42–44	Eco-Friendly Products and Technologies	○	○	○	—
(4) New environmental technologies and research and development	7–12	Reducing Environmental Loads with the World's Most Innovative Technology	○	○	○	—
	27	Environmental Accounting	○	○		4
	35–36	Initiatives by the Japanese Steel Industry	○			—
	42–44	Eco-Friendly Products and Technologies	○	○	○	—
(5) Environmentally sound transportation	9	Reducing Environmental Loads with the World's Most Innovative Technology			○	—
	34	CO_2 Reduction in the Value Chain	○			13
(6) Resource exploitations and real estate development/investment with less environmental impacts	—	—				—
(7) Waste management and recycling	29–30	Main Environmental Targets and Results	○	○	○	7–8
	41	Resource Recycling	○	○	○	12, 14, 23–24

Information and Indicators on Environmental Impacts of Business Activities and Environmental Initiatives Undertaken to Mitigate Them						
Item	CSR Report					Environmental Data Book Pages
	Pages	Content	JFE Steel	JFE Engineering	JFE Shoji Trade	
1. Resources Used and Energy Consumption						
(1) Total energy consumption and initiatives to reduce it	7–9	Reducing Environmental Loads with the World's Most Innovative Technology	○	○		—
	29–30	Main Environmental Targets and Results	○	○	○	7–8
	31–32	Materials Flow	○	○		9–10, 20
	33–34	Energy Savings and CO_2 Reduction in Steelmaking	○			11–13
	37	CO_2 Emissions			○	25
(2) Total materials used and initiatives to reduce them	7–8	Reducing Environmental Loads with the World's Most Innovative Technology	○	○		—
	29–30	Main Environmental Targets and Results			○	7–8
	31–32	Materials Flow	○	○		9–10, 11, 20
(3) Water withdrawal and initiatives to reduce it	31–32	Materials Flow	○	○		9–10, 11, 20
	38	Cyclic Use of Water	○			12
2. Recycled input resources (within the organizational boundary)	7–8	Reducing Environmental Loads with the World's Most Innovative Technology	○	○		—
	29–30	Main Environmental Targets and Results	○	○	○	7–8
	31–32	Materials Flow	○			9–12
	38	Cyclic Use of Water	○			12
	41	Resource Recycling	○	○	○	5–6
3. Products and Services and Environmental Impacts Arising from Production						
(1) Total products manufactured or goods sold	31–32	Materials Flow	○	○		9–10, 11, 20
(2) Greenhouse gas emissions and initiatives to reduce them	7–9	Reducing Environmental Loads with the World's Most Innovative Technology	○	○		—
	29–30	Main Environmental Targets and Results	○	○	○	7–8
	31–32	Materials Flow	○	○		9–10
	33–37	Global Warming Prevention	○	○	○	4, 12–13, 21, 25
(3) Total water discharge and initiatives to reduce it	31–32	Materials Flow	○	○		7–8
	38–39	Efficient Use of Water and Prevention of Contamination	○			11–12, 14, 22
(4) Effluents and nuisance, and initiatives to reduce them	7	Reducing Environmental Loads with the World's Most Innovative Technology	○	○		—
	31–32	Materials Flow	○	○		7–8
	38	Controlling Air Emissions	○	○		14
(5) Release and transfer of chemical substances and initiatives to reduce them	31–32	Materials Flow	○	○		7–8
	39	Management of Chemical Substances	○			14–19, 22–23
(6) Total weight of waste generated, waste disposed by land filling or incineration and initiatives to reduce them	8, 11–12	Reducing Environmental Loads with the World's Most Innovative Technology	○	○		—
	29–30	Main Environmental Targets and Results	○	○		7–8
	31–32	Materials Flow	○	○		9–10, 11–12, 14
	40–41	Resource Recycling	○	○	○	5–6, 23–24
(7) Significant spills of hazardous substances and measures taken for preventing them	39	Management of Chemical Substances	○	○		—
4. Conservation of Biological Diversity and the Sustainable Use of its Components						
	12	Reducing Environmental Loads with the World's Most Innovative Technology	○			—
	42	Eco-Friendly Products and Technologies	○			—
	45	Disclosure and Exchange of Information	○	○		—

Information and Indicators on the Economic and Social Contexts of Environmentally Focused Management						
Item	CSR Report					Environmental Data Book Pages
	Pages	Content	JFE Steel	JFE Engineering	JFE Shoji Trade	
1. Economic Contexts of Environmentally Focused Management						
(1) Economic contexts in an enterprise	27	Environmental Accounting	○	○		4
	28	Environmental Risks and Opportunities	○	○	○	—
(2) Economic contexts in society	28	Environmental Risks and Opportunities	○	○	○	—
2. Social contexts of environmentally focused management	13–16	Harnessing Human Diversity as an Organizational Strength	○	○	○	—
	17–23	Management	○	○	○	—
	46–58	Contributing to Society's Development	○	○	○	—

Miscellaneous Contents to Be Disclosed						
Item	CSR Report					Environmental Data Book Pages
	Pages	Content	JFE Steel	JFE Engineering	JFE Shoji Trade	
1. Events after the Reporting Period						
(1) Events after the reporting period	—					—
(2) Extraordinary events	—					—
2. Assurance and Other Measures to Enhance Reliability of Environmental Information						
	—					—

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