

# Environmental Accounting

Over the past three decades, JFE has invested huge sums in environmental protection, including measures to prevent air and water pollution, reduce noise, treat waste, and create greenbelts. JFE has also put great effort into energy-saving investment, achieving the world's highest level of energy efficiency.

It should be noted that JFE's current environmental activities were developed in the course of fulfilling its corporate mission of creating industrial and social infrastructure, and its current environmental costs

include the large ongoing financial burden of maintaining this accumulated investment. In particular, when evaluating annual expenses and results, it is important to consider these past efforts and their continuing benefits.

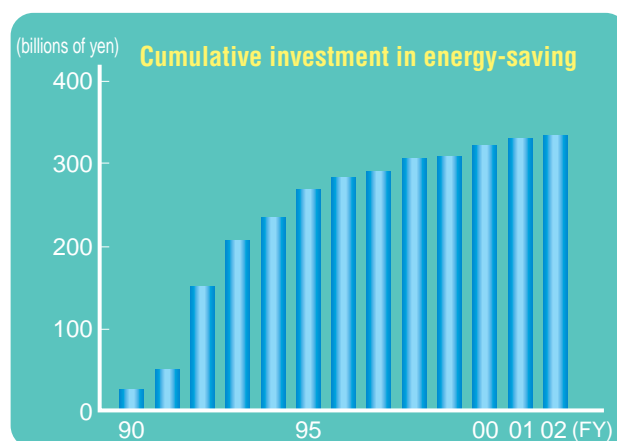
As one measure of management performance, JFE evaluates its environmental activities based on environment-related data. As an example of this, investments and expenses are included in the Environmental Report.

## Investment in Energy Conservation

JFE embarked on an aggressive program of energy conservation following the first Oil Crisis in 1973. After the second Oil Crisis in 1979, it developed or introduced a wide variety of waste heat recovery equipment and invested heavily in energy-saving production processes such as continuous casting and continuous annealing. Today, JFE is maintaining its position as a world leader in energy efficiency. Cumulative investment since 1990 has now reached approximately ¥334 billion.

Representative investments in FY2001-2002

- Measures to improve power plant efficiency
- Construction of new private power plant
- Installation of energy-saving regenerative burners at plate mill reheating furnaces



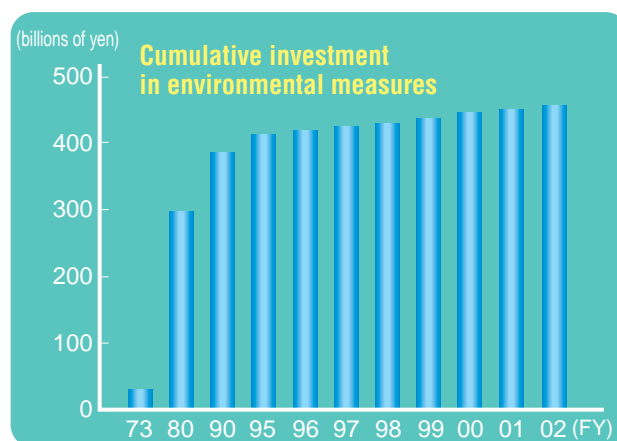
## Investment in Environmental Protection

Because JFE operates steelworks in the environs of large metropolitan areas, it has made particularly strong efforts to protect the environment, including construction of desulfurization and denitrification plants as measures against SOx and NOx in the atmospheric environment and water treatment facilities to reduce COD and prevent water pollution. As a result of companywide investment in environment-related equipment, which totals approximately ¥476 billion since 1973, JFE's clean steelworks boast the world's highest levels of environmental performance.

In recent years, JFE has actively invested in measures to recycle byproducts of its steelworks and apply iron and steel making processes as infrastructure for recycling in society at large, thus leading the movement toward a recycling-oriented society.

Representative investments in FY2001-2002

- Modernization of sintering machine flue-gas treatment equipment
- Modernization of incinerator flue-gas treatment equipment
- Improvement of steelmaking shop dust collection



## Main Results

The main results of environment- and energy-related capital investment and expenses are summarized on the following pages.

Energy Conservation		Environmental Protection	
Energy-saving effect	See "Success of JFE Steel's Energy Conservation Measures" (p. 20)	Environmental protection	See "Protecting the Environment" (pp. 23-24)
		Effective use of resources	See "Building a Recycling-oriented Society" (pp. 21-22)



## 2002 Totals

Investment in environment-related facilities was ¥9.4 billion, which accounted for approximately 10% of total capital investment for the year. Expenses were ¥70.6 billion. The primary focus of investment was environmental protection and prevention of global warming. Primary ex-

penses were environmental protection, effective use of resources, and prevention of global warming. Operation/maintenance and depreciation accounted for the majority of these expenses. Environment-related research and development expenses were ¥3.6 billion, or approx-

imately 10% of total research and development expenses.

In fiscal 2002, JFE Steel achieved a recycling rate of 99.5%. Energy-saving benefits were equivalent to ¥2.2 billion.

		Major item	Investment (billions of yen)	Expenses (billions of yen)
Environmental investment & expenses related to the JFE's own business	Management	Monitoring & measurement of environmental influence, EMS-related activities, environmental education & training, etc.		1.3
	Prevention of global warming	Energy conservation, effective use of energy, etc.	3.5	13.8
	Effective use of resources	Recirculation of industrial water, Recycling of by-products & wastes generated in-house, waste management, etc.	1.0	17.4
	Environmental protection	Prevention of air pollution, water pollution, soil contamination, noise, vibration, ground subsidence, etc.	4.8	31.7
	Miscellaneous	Fees, charges, etc.	0.1	2.1
Environmental investment & expenses related to customers and society	Research & development	Technological development for the environment, energy, prevention of global warming		3.6
	Social activities	Protection of the nature, support to forestation, information disclosure, advertisement, etc.		0.7
Total			9.4	70.6

The totals mentioned above were calculated on the following basis.

- Period: April 2002 to March 2003
- Scope: Environment-related investment and expenses at JFE's steelworks, but in the case of research and development, on a companywide basis. Calculations do not include presumed effects based on estimates or risk avoidance benefits.

(Note)

Calculations do not include investments made primarily for purposes other than environmental protection, for example, renovation of superannuated facilities, even when the process as a whole realizes a net energy saving in comparison with the former process.

## Future Challenges

In maintaining and promoting environmental accounting, an accurate grasp and correct evaluation of the actual status of environmental activities are necessary. However, there are cases where existing methods are inadequate, for example, items which cannot be quantified and problems in determining the applicable scope of effects. JFE is continuing to develop more appropriate concepts and methodologies for maximizing the effectiveness of environmental accounting in environmental management.



Greenbelt at steelworks