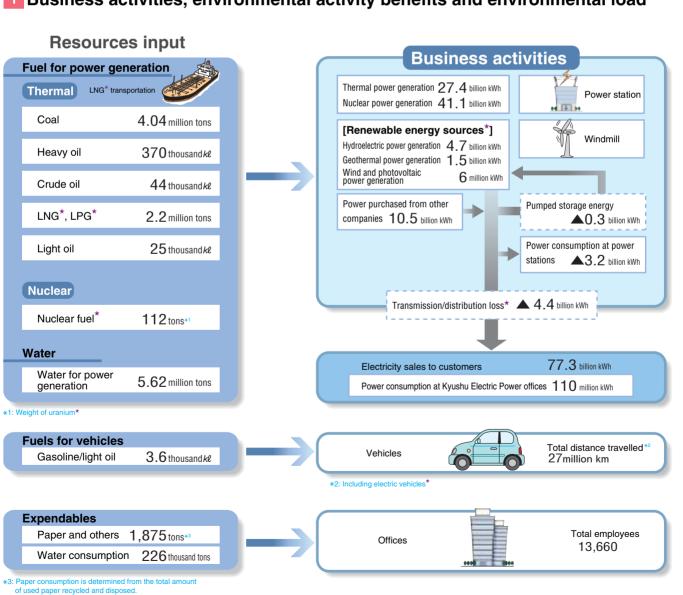
# 2Environmental Accounting<sup>\*</sup>

Kyushu Electric Power introduced environmental accounting in fiscal 2000. The costs and benefits of environmental activities are taken into account in decision making about the implementation of environmental activities and are disclosed to the public.

For efficient, effective implementation of environmental activities, the environmental accounting\* system must evolve as a tool for promoting environmental management\*. It must enable quantitative understanding of the environmental load\* caused by business activities, the costs and benefits of the environmental activities\*, as well as a thorough analysis that includes consideration of their relation to business activities.

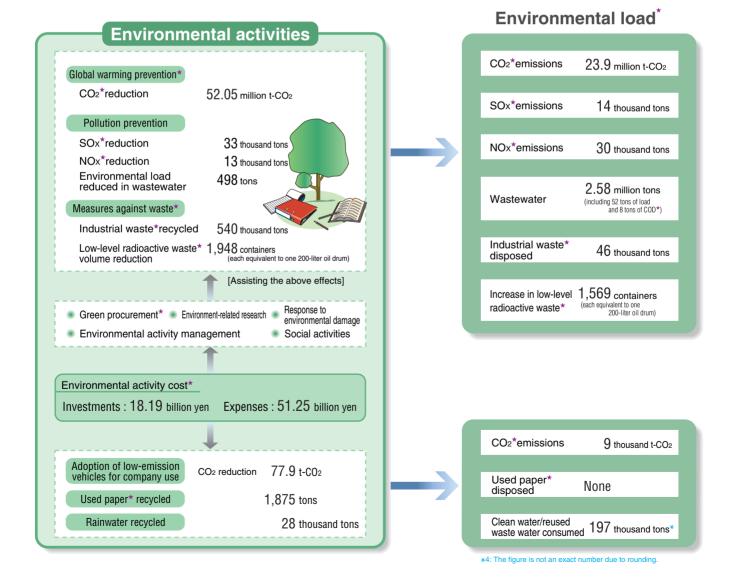


## Business activities, environmental activity benefits and environmental load

COLUMN NO.1

Environmental activities management by utilizing IT in environmental accounting

The company has been expanding the use of information technology (IT) in the field of environmental accounting at its operational sites such as offices and power stations. In fiscal 2004, environmental load and environmental activity costs were calculated, and the related database was constructed by each site. As the use of IT is promoted in environmental activity management, we have been endeavoring to establish a comprehensive online system connected to the existing internal systems with the expectation that management indexes experimentally introduced can help the offices and power stations closely manage and control its own environmental load. We will actively promote the further use of IT as a management tool for environmental accounting.



## **2** Change in environmental activity costs<sup>\*</sup> (FY2002 and 2003 records)

			Unit: 100 million yen (except		for those specially indicated) FY2003	
Environmental activity category		Main activities	Investment Cost		Investment	Cost
Global environment preservation	Global warming prevention*	Installation of power sources with low CO2* emissions, thermal efficiency* improvement at thermal power stations, introduction and support for new energy* equipment, contribution to World Bank Prototype Carbon Fund*, energy saving (including low-pollution vehicles*) and SF6* emission control	6.0	49.3	0.6	70.2
	Ozone layer* protection	Measures for Freon* and Halon* recovery	0.0	0.1	0.8	0.3
Local natural environment	Air pollution * prevention	Flue gas* treatment (desulfurization*, denitration*, particulate* reduction equipment) and use of fuel with low sulfur content	68.4	82.7	57.4	156.0
preservation	Water pollution* prevention	Waste water treatment and measures against oil leaks and warm wastewater* at power plants Noise and vibration measures at power plants,	11.6	28.6	16.4	28.9
	Noise and vibration prevention	Noise and vibration measures at power plants, substations and transmission facilities	15.4	0.7	7.4	1.4
	Industrial waste*	Reduction and recycling of industrial waste*	11.6	33.7	14.7	48.1
		Disposal of industrial waste* and PCB* storage	14.7	4.1	10.7	10.6
Resource	General waste*	Reduction and recycling of general waste*	1.6	2.8	0.5	5.9
recycling	Radioactive waste* and spent nuclear fuel*1	Disposal of general waste* Disposal and other treatment of radioactive waste*	0.0	6.8 71.1	0.1	60.6
Green procurem	nent*	Purchase of office and stationery supplies as a rule (Additional costs incurred from green procurement*)	_	0	_	0
Environmental activity management	Environmental activity organization	Costs from environment-related license acquisition, education* and training, and for personnel	0.0	1.7	0.0	3.2
	EMS* application and maintenance	EMS* (ISO 14001* and ISO-based system*) acquisition, application and maintenance	0.0	2.6	0.0	3.6
	Environmental load * measurement and monitoring	Environmental impact assessment, monitoring and measurement of environmentally burdening substances, and PRTR* measurements	2.9	16.9	1.3	13.9
Environment-	Environmental conservation	Prevention of global warming, improvement of air and water quality and effective use of waste	3.0	6.1	0.0	1.7
related research	Environmental load control during transmission and distribution	Improvement in thermal efficiency and transmission/distribution loss * factor	0.0	0.1	0.0	0.0
Social activities	Greening of sites	Greening, maintenance and management of Kyushu Electric power station sites	4.4	13.5	8.5	11.9
	Maintaining quality townscapes and surroundings	Measures to create harmony with surroundings such as tending to buildings with scenic care and installing underground transmission and distribution lines	65.5	85.6	62.9	86.2
	Environment Month*	Environment Month* and Kyushu Homeland Forestation Program	0.1	0.8	0.0	0.2
	Supporting local environmental activities	Support for local environmental activities and environmental organizations*	0.0	0.7	0.0	0.2
	Environmental information disclosure	Environment Action Report, pamphlet and website preparation	0.0	0.4	0.0	0.5
Response to environmental impairment     Pollution load levy*under the Pollution-related Health Damage Compensation Law*			0.0	8.5	0.0	7.8
	То	tal	205.7	417.1	181.9	512.5
		Kyushu Electric Power total investments and costs	9%	3%	9%	4%
Reference Total investments   Total costs				416	2,0	)69
			12,7		12,1	35

\*Listed are Kyushu Electric Power's costs for environmental activities in FY2002 and 2003 and benefits from environmental activities in FY2003. Figures are rounded, and may not add up to the total. \*1: The figure does not include allowance for spent nuclear fuel reprocessing\*. (See the reference table below.)

[Reference]		FY2002		FY2003	
	Main activities	Investment	Accrued	Investment	Accrued
	Allowance for used nuclear fuel reprocessing $^{\ast 2}$	0.0	497.6	0.0	270.4

\*2: With respect to the used nuclear fuel which is stored at year-end, the costs required to reprocess\* such used nuclear fuel in the future are partially accrued at year-end in accordance with the applicable regulations.

## 3 Environmental activity benefits (FY2003 records)

	Environmental activity benefits					
	Items	Extent of benefits, etc.				
	Nuclear power generation	33.33 million t-CO <sub>2</sub> / yr				
CO2 <sup>*</sup>	LNG* power generation	5.59 million t-CO <sub>2</sub> / yr				
	Hydro, geothermal power generation	6.66 million t-CO <sub>2</sub> / yr				
	New energy * power generation and purchase	0.5 million t-CO₂ ∕ yr				
	Thermal efficiency* improvement, transmission/distribution loss* reduction	5.57 million t-CO <sub>2</sub> / yr				
	World Bank PCF*	4,512 t-CO₂ ∕ yr				
	Energy saving activities	217 t-CO <sub>2</sub> / yr				
	SF6*emission reduction*1	0.4 million t-CO <sub>2</sub> / yr				
Freo	n* emissions *2	0.2 ODP ton ∕ yr				
	reduction	33,270 tons ∕ yr				
	* reduction	, , ,				
	culate* reduction	13,473 tons / yr				
		97,567 tons / yr				
-	nmental load reduced in wastewater	498 tons ∕ yr				
Mana	aged properly in conformity wit	th laws and ordinances				
Amo	unt recycled	543 thousand tons $\checkmark$ yr				
Prop	er final disposal amount	46 thousand tons / yr				
	l paper* recycled	1,875 tons ∕ yr				
Used	l paper* properly disposed	0 ton∕yr				
Volume	e reduction in low-level radioactive waste $\star$	1,948 containers / yr (each equivalent to one 200-liter oil drum)				
Amou	unt of used nuclear fuel stored*	2,914 assemblies				
	en procurement * is applied for stationery supplies as a rule.	the purchase of office				
Particip	pants in training and lectures (in-company)	17,820 people / yr (accumulative)				
Persor	nnel with environment-related licenses	1,669 people				
Sites t	hat acquired ISO14001 * certification	6 sites				
	that introduced EMS*	139 sites				
No. of monitoring and	Continuous monitoring and measurement items *3	194 items				
measurement points	Other monitoring and measurement points	27,641 points				
	earch cases in ical-use phase	0 case				
Total green area		47.05 million m				
No. of buildings with scenic care		182 building				
No. of	steel towers with environmental care	82 units				
Length of underground distribution lines		3,073 km				
No. of pa	articipants at lectures, etc. (outside the company)	1,337 people / yr (accumulative)				
No. c	of trees and saplings planted	164,101⁄y				
No. of	environment organizations* supported	43 organizations				
No. c	of reports published	34,300 copies ∕ yr				
Webs	ite access (environment-related)	266,229 hits ∕ yr				

\*1: SF<sub>6</sub> emission reduction is converted to the weight of CO<sub>2</sub> using the global warming potential for SF<sub>6</sub> (23,900)\*. The amount of reduction includes that attained by equipment overhaul and dismantlement.

- \*2: The emissions reduction for Freons is converted into a relative value taking ozone depletion potential (ODP) per unit weight of CFC-11 as 1.
- \*3: Environmental load reduced in wastewater is converted by measuring each pollutant contained in the wastewater into the weight of COD\* standards in accordance with the environmental quality standards\*.

#### FY2003 calculation results

The environmental activity investments and costs<sup>\*</sup> for fiscal 2003 were 18.19 billion yen and 51.25 billion yen, respectively. Compared to fiscal 2002, the environmental activity investments decreased by 2.38 billion yen, while the costs increased by 9.54 billion yen, mainly due to the following:

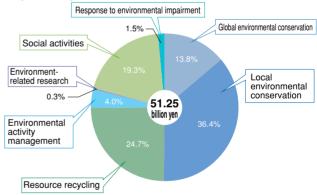
#### **⊘Investments**

Capital investment was reduced compared to fiscal 2002 because of the completion of major capital investments in facilities including the flue gas\* treatment facilities at Unit 2 of the Reihoku Thermal Power Station, which started commercial operation in fiscal 2003.

#### **⊘Costs**

Costs soared in fiscal 2002 due to the recording of depreciation related to fixed assets resulting from the start of commercial operation of the Reihoku Thermal Power Station Unit 2. Also, electric costs increased due to the dissemination and promotion of the use of new energy powers\*.

#### Environmental activity cost\* component ratio (FY2003)



## 4 Economic effects from environmental activities

Among the environmental activities, the real economic effects that lead to savings and income are shown below:

		(Unit: 100 n	nillion yen)	
Environmental activity category		Main activities	Quality of benefits	
Global environmental preservation	Global warming prevention	Fuel cost savings from improvement of thermal efficiency and the transmission/distribution loss* factor; and introduction of energy-saving, low-pollution vehicles	212.1	
Resource	Waste measures	Income from sale of unneeded supplies	1.7	
recycling	Waste reduction	Final disposal cost savings from recycling	37.4	
Savings in statutory charges		Pollution load levy savings from SOx emissions reduction	15.5	
Total			266.6	

\*Figures are rounded and may not add up to the total.